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Social Customer Relationship Management in higher education

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This thesis is dedicated to my husband and little ones.
One more thing for me to be obsessed with.

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GLOSSARY

Customer relationship management (CRM) - The infrastructure that enables the delineation of and increase in customer value, and the correct means by which to motivate valuable customers to remain loyal – indeed to buy again (Dyche, 2002 p.4).

Social customer relationship management (SCRM) - SocialCRM is a philosophy and a business strategy, supported by a technology platform, business rules, processes, and social characteristics, designed to engage the customer in a collaborative conversation in order to provide mutually beneficial value in a trusted and transparent business environment. It's the company's response to the customer's ownership of the conversation (Greenberg, 2009, p. 34).

LIST OF ABBREVIATIONS

Customer relationship management (CRM)

Information Technology (IT)

Social customer relationship management (SCRM)

ABSTRACT

Farnsworth, Victoria A. M.S., Purdue University, May 2016. Social Customer Relationship Management in Higher Education. Major Professor: Jeffrey L. Whitten.

Customer Relationship Management is a concept that has become a requirement for any successful entity to attract and retain desired constituents. It is a set of processes and tools that help track, analyze, and act upon customer related data. Over the last decade, the toolsets have evolved to include social media as another source of information and connection. Nowhere is this information and connection more important than in higher education where globalization and tighter budgets have created a competitive market. This research evaluated the use of this most recent social toolset and its effectiveness in a higher education institution, all from the vantage point of what is important to the student and at which phase in their university relationship. The research used a survey instrument to gather information from a varied audience and shows that misalignment existed amongst the different university constituents.

CHAPTER 1. INTRODUCTION

This chapter provides an overview of the research study and establishes a context of what is included. This chapter is where the research question is clearly stated with its scope, significance, definitions, assumptions, limitations, and delimitations.

1.1 Statement of Purpose

Anyone who has been a consumer of products or service for any amount of time has been inundated with offers, rewards, emails, and mailings from a variety of companies. This constant pursuit and competition for the customer and the subsequent management of that customer relationship has enabled an industry that seems to consume money at a much faster rate than its customers can consume its products. The Customer Relationship Management or CRM industry is one of the fastest growing (Columbus, 2013) and has even maintained a level of growth when the economy wanes, showing that this search for the life time customer is akin to the search for the Holy Grail.

The researcher has spent 20 years employed at a University supplying customer service from many different facets and channels to many different customers, most of

them being related to information technology (IT). As IT projects have come and gone, been implemented and retired, it seems that a centralized effort to consolidate university constituents into one comprehensive view has never been viewed as a top priority of universities. Imagine the CRM value of being able to follow a potential undergraduate all the way through their degree, employment, masters, successful entrepreneur, research-funder, and the finally, big donor that leaves a legacy much beyond their lifespan.

While the use of CRM in higher education may not be as mature as many other industries (Hanover Research, 2014) there is value to be gained by finding the most impactful channels and areas of focus to use those efforts wisely. The purpose of this study was to investigate and evaluate the effectiveness of the use of CRM, more specifically Social CRM (social media-like customer interactions), in higher education. In other words, how aligned are the university stakeholders on how important and how effective was the connection to students via social media?

1.2 Significance

Technology and the Internet fell from marketing graces in the late 1990's when the dot-com bubble burst. These brand new eCompanies failed to produce expected income and then neglected to pay their enormous marketing bills causing the tailspin and decline of marketing firms worldwide. The companies that survived had to reinvent themselves in light of this new online world. Since then, technology and marketing have

been in on-and-off again relationships until circa 2005 when they rebuilt a strong foundation around data mining, customer experiences, and social media.

In 2013, Gartner predicted that CRM will become a $36B industry by 2017. At that point in time it is also expected to outgrow the largest existing software industry, Enterprise Resource Planning (ERP) (Columbus, 2013). The growth in the CRM industry has been virtually impossible to predict and actual growth has far exceeded original expectations primarily due to the fortuitous linkage of CRM tools to social media, like Facebook, Twitter, and LinkedIn, to name a few. Social CRM has become the solution-set that corporations and marketers are using to reach a diversified online customer base, even without any real evidence of its effectiveness. Social CRM has become the way for brands to reach out to a large captive audience that are willing to unknowingly share a large amount of personal information for the privilege to share status updates, videos, and memes with a larger audience than they realize. In fact, nearly 2.1B of the world's 7.2B people have active social media accounts, with over 1B of them actively using a mobile device to access these accounts (Bullas, 2015). Long gone are the days when a company paid a marketing firm a ton of money to create an advertising campaign to reach a static television home viewing audience. Now, with a small amount of effort and budget, these same companies can reach a specific targeted consumer with just a few keyboard clicks.

The same pervasive online access that allegedly strengthens the reach of companies also creates a competition for knowledge consumers in higher education.

The 45% of the world population that has Internet access (Bullas, 2015) also has the ability to take classes from a plethora of accredited institutions anywhere, often for little or no cost. Building a lifetime relationship with their constituents has become just as important in higher education as it funds a cycle of learning, teaching, researching, and donating. Universities have been slower to adopt social media as a way to manage their customer relationships but they are definitely on that same path and can learn from what companies have experienced.

1.3 Scope

The vastness of the higher education landscape is extreme, so the scope of the research was narrowed. The scope was set to Purdue University, West Lafayette, Indiana. As a large research institution in the Midwest, Purdue is a microcosm of a typical University that also includes a large number of international students. This allowed the researcher to compare data across some different variables such as role, classification, etc.

Limiting the geography of the research was very important, but just as important was the primary area of focus. Trying to glean information around the entire CRM body of knowledge would be too large of an undertaking. While the literature review will cover many aspects of CRM, the research itself was focused around the use of social CRM in higher education.

A major research university also has a widest set of customers or constituents. Encompassing all of them into one research study would not likely produce meaningful results. So, the scope was narrowed to be from the point of view of one of the primary customers, graduate and undergraduate enrolled students of any type. This leaves many other customer views out of scope, such as alumni, research funders, state taxpayers, employers of graduates, etc.

1.4 Research Question

The next step to better defining this research project was the statement of the research question. In this study, the researcher is attempting to answer the following question:

> Is there alignment amongst university constituents on the importance and perceived effectiveness of social customer relationship management (SCRM)?

1.5 Assumptions

Every research project is based on a certain set of assumptions. The assumptions for this research project were as follows:

- The best way to get valuable feedback from constituents was through a survey instrument that can be used in a similar way between university administration and the students.

- The research results obtained at Purdue University were similar to results obtained at other universities, so there is widespread validity to this study.

1.6 Limitations

The limitations of this research study included:

- Student/faculty/staff survey response rate may not be great and statistically significant results may not be achieved. (This limitation was disproven by a much better than expected response rate.)

1.7 Delimitations

The delimitations of this research study included:

- The focus of this study was Purdue University, West Lafayette, IN, as a representative audience for all colleges and universities. The representative characteristic of Purdue was achieved by collecting data from internal colleges and schools that have diverse technical backgrounds and expectations.
- Social CRM was chosen as a focus due to its widespread use and impact on college-age student constituents.

1.8 Summary

This chapter provided an overview of this relevant research thesis. It covered what was included in the study and what was outside of the scope. This introductory section also

set the research boundaries and described assumptions that have been made by the researcher. The research question asks about how Social CRM is being used at an institution of higher learning and whether that usage is meeting the expectations of the primary customer. Further chapters will provide a review of relevant literature, insight into the research methodology, and analysis of the research results.

CHAPTER 2. REVIEW OF RELEVANT LITERATURE

It is not hard to imagine a world where a supplier notices that a customer runs low on a critical product through an omnipotent tool that monitors inventory and sales of both the customer and the supplier. Or a world where a mobile salesforce receives constant updates of customer potential while "on the road." A review of the relevant literature around customer relationship management (CRM) will talk about the aforementioned conditions as part of the history of CRM. This is where the CRM snowball started, and it continues to grow from there, plowing its way through the tundra of manufacturing best practice into a world where "big data" mining moves from delighting-to-frightening in the time it takes for snow to melt.

This literature review will wind its way through the history of CRM all the way to the crystallization of social CRM (SCRM), the foundation of using social media as a channel to monitor and attempt to engage with consumers. It will also cover different case studies throughout the journey to demonstrate CRM and SCRM in action. Once the history and current status are covered, the review will then delve into higher education and how CRM and social CRM are being used in that unique environment. At every step along the way, this chapter will cover usage case studies of how these concepts are being used in the different environments. All of these case studies and the other

literature reviewed will demonstrate the relevance and importance of this topic and the related research.

2.1 Customer Relationship Management (CRM)

The best way to begin a conversation about CRM is with a short definition. According to Dyche (2002), CRM is:

> "The infrastructure that enables the delineation of and increase in customer value, and the correct means by which to motivate valuable customers to remain loyal – indeed to buy again. (p. 4)"

The foundation of this definition is the word "infrastructure." In this case, this essential building block refers to the people, process, and technology that all have to align in order to set the definition of customer value and to continuously be improving. It is interesting to note that the customer portion of this definition arrives at the end, along with the notion of repeat business. Later discussions around the evolution of company focus from product to customer might potentially lead to a slightly modified definition as the paradigm begins to shift.

2.1.1 CRM History

There was a time in the not so distant corporate past when getting the best product or service to market first was the primary focus. This product-centered philosophy was evidenced by the amount of research and development that was put into new and unique product lines or services. The next phase of this product view

involved companies taking on massive process overhaul around inventory, efficiency, and quality in order to make these products at a cheaper price, thus increasing their overall profit margin. (Dyche, 2002, p. 5)

When companies like Burger King launched their then-new strategy of "Have it Your Way," the snowball started rolling. Globalization and e-business soon created an abundant marketplace where consumers could find any product that they desired, often time with a click of a button. Corporations that were typically organized around their product lines began to realize that maintaining a loyal customer was going to require refreshing their strategy. The movement from product-focus to putting the customer at the center of the corporate universe created an entire software industry based on the same technology premise as e-business, Customer Relationship Management or CRM (Bogan, 2001). While CRM seemed to bring with it promises of longevity, the complete shift was arduous and often wrought with failure. One of the main challenges was the high percentage of failed CRM implementation projects. In fact, a 2001 study of 14 companies showed that while they all knew that they needed to change their focus, only 50% of them had any customer-focused product lines and 33% of them were still organized around their product line rather than a customer line (Bogan, 2001). These necessary CRM projects became victims of buy-in, communication failures, and technology missteps even though they had strong objectives and the best of intentions.

Just to put some data behind the words, in 2002, CRM was still a maturing field and project implementation failure rates were still between 55% and 77%. The biggest

reason (~47%) for these failures was the people side, specifically the buy in of the employees using the systems. The earliest CRM tools spent effort on being customer and management friendly but not on being useful to the people behind the keyboards entering data. Early toolsets were not advanced technically which only led to additional connection and data complexities. The fact that the data being entered wasn't useful to the people entering the data and that it gave management a way to compare their performance to other employees led to a disenchanted salesforce that began to despise all that CRM was supposed to deliver. (Greenburg, 2009, pp. 31-33)

The dismal outlook for CRM drastically improved beginning in about 2004. The tools became more advanced, both from technical database architecture and from a usability perspective. Sales force employees on the ground slowly started to buy in with the advent of sales force automation tools like customer pipeline information and automated quoting tools. This shift towards useful tools caused the CRM tool industry to grow and that growth has continued, even through major economic downturns. In fact, some analysts think that this industry is somewhat recession-proof because CRM is designed to get the most out of your customers as efficiently as possible at the right time, even if that time is during tough economic conditions. (Greenburg, 2009, p. 35)

CRM history continues on with extreme growth, constantly shattering all forecasts and expectations along the way. In 2013 the world wide CRM market grew to $20.4B, increasing over $2B from 2012. The industries with the top spend toward that $20B were in the IT service and communications, followed closely by manufacturing,

and banking/financial industry were in the third spot. The most recent forecast shows the industry continuing to grow, reaching over $36B by 2017. As the industry has grown, the software companies are keeping pace with new features and finding ways to help with successful implementations. To that end, the tool leaders in the CRM field have continued to expand their software as a service (SaaS) offerings and almost 41% of 2013 sales were in the cloud. The movement to cloud is being pushed by companies looking to implement more quickly and have additional flexibility beyond their legacy systems (Columbus, 2014.)

Overall, CRM has had a history that is not unlike many other major technology-driven industries: a rough beginning marked with user buy-in, process, and technology implementation issues all requiring a reset. The industry is definitely coming out the other side with better tools, enhanced focus, and a stronger value proposition.

2.1.2 Why CRM?

It is equally important to understand why CRM is so important. Why would this industry be growing at the rate that it is if it weren't essential for success? Any discussion around CRM begins with the premise that it costs a lot less to sell products to an existing customer than to find a new customer. Reaching agreement on the actual cost differential is a little challenging, but most experts agree that it costs between 5 and 15 times as much to find a new customer as it does to sell something to an existing customer (Safko, 2013). Even this imprecise statistic along with case studies of

successful CRM program metrics brings new customers to CRM tools regardless of company size.

Ironically, CRM implementation outputs have allowed some larger e-businesses to understand the marketing costs that they put into finding new customers. According to Safko,

> Here are some typical industry standard cost of customer acquisition values, the amount of money each company spends on average on marketing and advertising to acquire just one new customer:
>
> - Travel: Priceline.com: $7
> - Telecom: Sprint PCS: $315
> - Retail: Barnesandnoble.com: $10
> - Financial: TD Waterhouse: $175. (2013)

Knowing the exact costs that it takes to bring in a new customer should be high on the list of all corporate CEOs regardless of the maturity of their CRM program. Those costs then have to be weighed against the average lifetime that a customer can be expected to have with a company.

At a very high level, the two main objectives of CRM are:

- Finding new customers
- Retaining the customers that you already have.

While these are simply stated goals, there are some more detailed value drivers that continue to push companies to CRM. The information that CRM provides allows companies to find efficiencies, enhance productivity, and make more "right" decisions. The subsequent table breaks down into more detail some of the CRM value and how it might be achieved (Kostojohn Johnson, Paulen, and McKinnie, 2011).

Table 2.1 Value Drivers for CRM

VALUE DRIVER	HOW?	OUTCOME?
Data driven organization	• Consistent processes drive efficiencies • Dashboards increase visibility	• Visibility into sales pipeline • Analysis on lost sales • Lead analysis, better hit rates
Increased productivity	• Automated escalations • Notification on sales • eQuote generation • Relate all customer interactions	• Management awareness • Visibility into service issues that might impact sales • On the road management of customer service
Providing better experience	• Each interaction is informed • Self-service options • Targeted communications in choice medium	• Better issue resolution and ownership • Repeat business • Word of mouth informs

The value that a successful CRM implementation can drive is immense, but the investment has to be weighed against the lifetime value of a customer, the cost that it takes to bring them in, and the operational efficiencies that can be gained by making information more readily available.

2.1.3 CRM Case Studies

This discussion has covered the history of CRM and why it is so important to organizations. The next step to building the case for value is to describe some specific CRM implementations and the outcomes that some companies have achieved. One of the companies that come to mind when discussing successful CRM is the Ritz-Carlton Hotel chain. An early adopter for CRM, this company learned that it wasn't just about the data that was collected about a customer, but the action that was taken as a result of the data and the empowerment given to every level of employee. The hotel chain calls its CRM system "Mystique." The seemingly misnamed system leaves very little to magic and has been made famous by the level of detail that is stores about guest preferences and past stays. Again, while the data is valuable, teaching employees (even before they are hired) how to use this data to delight customers has led to them winning many customer service awards. A prospective employee is asked for some of their preferences through the interview process. If they are "selected" to be a final hire and make it to the new employee orientation, the Ritz-Carlton senior leaders will be there welcoming them and providing them with some of their most unique preferences, demonstrating to them the intimacy that comes with custom individual experience. The

leadership at this company has bought in at the highest level to CRM and the value that it can bring to repeat business and enticing of new visitors (Michelli, 2008.)

Another company that is known as a giant in the CRM world is best represented by a large mouse wearing gloves. Disney has been a leader in the customer service arena for many years and strives to sell an entire experience rather than just a visit to theme parks. One of their first attempts at digital customer service was a Pal Mickey stuffed toy (with a small computer) that gave guests information about wait times, food choices, scheduled events, etc. while they were at a theme park. While a first step in making useful information readily available to customers, this was just a step on their journey to overall satisfaction. Currently, they use rubberized wrist bands as all-purpose devices to provide access to all services as well as location devices to provide personalized attention to guests whenever possible, all powered by the analyzed data of past experience and provided preferences. Disney has invested in CRM to an extreme level and has continued to evolve their solutions as technology has advanced (Smith, 2013.)

The last CRM case being discussed here is less obvious than a hotel concierge that knows what opera tickets to purchase, or a stuffed mouse that knows to schedule a breakfast with the princesses. In fact, according to CRM expert Paul Greenberg:

> I have never given them any awards nor have they ever submitted any questionnaires to me, but how I can possibly ignore what is likely the most

> disruptive organization in the 21st century – or at least the most disruptive business of this century? (2014)

Greenberg is referring to Amazon as he talks about one of the most understated CRM success stories of which he is aware. Few companies have been able to drastically change the way the business is done in less than 20 years. They offer a service that can be as personal as the consumer chooses. They analyze mountains of data to provide the best product recommendations based on what customers have purchased in the past, the time of year, and their market segment. But, Amazon isn't just a shopping site. There are at least two other influential offerings; their Amazon Prime service and their Mayday service. Prime started out as preferential shipping and soon led into the streaming of free movies, shows, radio, and books. Mayday is a video based customer service assistant that consumers can use with an Amazon tablet to resolve problems almost instantly. Amazon has shown through their constant evolution and improvement that the customer is at the center of their strategy and that future innovation will be customer experience driven (Greenberg, 2014.)

The discussion up to this point has covered what CRM is and a brief history of CRM. It also discussed the overall objectives of CRM and some specific value drivers that companies are seeking. Lastly, the topic turned to three case studies of companies that have used CRM in very different ways to achieve success related to their customer experiences. This has been a brief beginning that lays the foundation for further review of this diverse and valuable topic.

2.2 Social Customer Relationship Management (SCRM)

Any paper that covers the topic of CRM that was written after 2008 would be remiss to omit the advent of social CRM (SCRM). Social media usage has exploded in the last decade and has become a plentiful source of customer information at a fraction of the cost of traditional CRM. Companies are flocking to social media hoping to find an easy and cheap answer to lifelong customer relationships. The transition from product-focus to customer-focus is only a piece of the shift as companies now have to respond in an environment where the customer is running the show (Greenberg, 2009).

2.2.1 SCRM: What and Why?

Social CRM (SCRM) is defined by Paul Greenberg (2009, p. 34) as:

> SocialCRM is a philosophy and a business strategy, supported by a technology platform, business rules, processes, and social characteristics, designed to engage the customer in a collaborative conversation in order to provide mutually beneficial value in a trusted and transparent business environment. It's the company's response to the customer's ownership of the conversation.

A comparison to the earlier definition of CRM shows the evolution of complete customer ownership of the relationship. Even by its nature, SCRM is the company working to find their customer in customer preferred social media channel, trying to "listen" to what they customer is doing in hopes that they may glean some valuable information from what they hear.

Why are companies responding so quickly to social media and working to implement an SCRM strategy? The quick response is driven primarily by a numbers game. Nearly 2.1B of the world's 7.2B people have active social media accounts, with over 1B of them actively using a mobile device to access these accounts on a regular basis (Bullas, 2015). The value drivers of SCRM are also a little customer-evolved over those of traditional CRM. SCRM is the way that companies hope to:

- Engage with the customer, at the customer preferred time and virtual location
- Provide the customer with a very personal experience, keeping them engaged and loyal (even entertained)
- Transact in ways that add value for both company and customer
- Build a relationship over time so that a company can guide the future of that customer relationship (Woodcock, Green, & Starkey, 2011.)

SCRM strategy and toolsets are not a replacement for traditional CRM and marketing techniques. SCRM just adds capability to manage customers throughout the lifecycle from the virtual sidelines. It provides a real-time listening and potential to engage at any time, through limitless and constantly evolving options. The goals of traditional CRM at the highest level are to find new customers and get them to make repeat purchases. The highest level of goal for SCRM additionally is to increase the potential for sales at a lower cost by real-time view of customers as they are going about their daily interactions. At a lower level of detail, SCRM strategies will hopefully

help companies engage with their highest value consumers and get to know them with the end goal of profitable, targeted engagement (Woodcock et al., 2011.)

2.2.2 SCRM Toolsets

To understand SCRM at even the highest level, it is important to understand the toolsets that are involved and their underlying purpose. The SCRM toolset is often an extension of a normal CRM suite that captures interactions about active and potential customers. One of the most important aspects of the SCRM suite is the pulling together of all of the channels of social media where a company brand may be mentioned. This has allowed companies to monitor what customers are saying and respond to them in their preferred channel. This strongly overlaps with the normal customer service tracking processes and these tools are often used by operational customer service staff. This using of social media channels to retrieve messages is referred to as social media "listening." While the main purpose for listening is reactionary and management of brand, there is also an aspect of being proactive from a marketing view. Companies also focus their SCRM toolset on looking towards the future. What competitors are being talked about? What new products could meet other related consumer need? What are the company's highest value customers doing on social media? Who do they connect to and can that connection be shared? Are there high value customers geographically in the area where you could reach out to them (DeLoatch, 2014)?

The toolset leaders in the SCRM space are some of the biggest names in software today: Salesforce, Oracle, etc. However, there are many analysts that disagree

that SCRM is really a toolset that stands on its own. They even disagree when companies say that they have a social media strategy. In their opinion, SCRM software is just an enhancement or additional channel to existing CRM tools and therefore shouldn't require its own evaluation or Gartner quadrant. Instead, they say that SCRM is really more about the process and people than it is about separate technology applications. Analysts like Mitch Lieberman argue that SCRM tools are just "the company interacting with its customers" and "humanizing your organization." (2012) So, instead of focusing on a new toolset, companies should spend more time focusing on the people and processes behind how to engage better with their customers (Lieberman, 2012.)

2.2.3 SCRM: Worth it?

Understanding how SCRM toolsets are being focused brings us to the next discussion point: is the SCRM hype and social media focus worth the investment to companies? Analysts want to be clear that there is a distinction between social media and SCRM. Some of this discussion showed up earlier under toolsets. SCRM is the strategy that may leverage social media (tools and techniques only) but does not depend on it. SCRM is about getting intimate with a customer and responding to what they can teach by changing processes and the overall business. The ROI for SCRM will take several iterations to achieve and will have to evolve to be considered successful. Similar to traditional CRM, there are bound to be continued reports of overall failures in

implementation projects because early expectations were just too unreasonable to be achieved. For example, a company might implement a listening technique to respond to customer issues that show up via Twitter. The ROI for this would be around a channel that is less expensive than going through normal call center processes. As this effort moves forward, the company may realize that there isn't enough information in the tweets and have to reach out to the customer and have them contact the call center anyway. The ROI for this specific effort hasn't been achieved and may even harm because a customer issue was not resolved in the customer preferred channel. This kind of issue may even result in more costs as issues may be duplicated or just added to existing volume of customer service issues. Short term gains without clear longer term metrics and strategy linkage could lead to a lot of costs and lost revenue (Kolsky, 2010.)

Many companies are investing in their SCRM and social media programs with the hope that this engagement will impact a customer's long term loyalty to the company and impacting revenue to the positive. With social media and its ubiquitous nature, companies are hoping for a less-expensive investment that will have a lasting impact. IBM Institute for Business Value decided to test to see if company and customer expectations around social media were in alignment. In October of 2010, they completed a survey of over 1000 customers from different age groups, countries, and income levels. They sent the same survey to 350 business executives in similar countries from different business sectors. They also supplemented business results with qualitative data obtained through interviews. The results that were obtained surprised

companies that were hoping that their customers connected with them on social media because of loyalty. In general, here are some summaries of the results from Baird and Parasnis (2011):

- While many consumers are flocking to social media, only few (~10%) are actively editing content.
- Most interact with social media to connect with friends and family – not specific brands.
- Customers want tangible benefits if they are connected with a company.
- Most businesses (60%) think that a customer connection means that a customer has passion for a brand and that connection will increase loyalty. Only 38% of consumers agree.

In general, the results showed that there were differences in what companies thought they were doing and what consumers wanted from them. The top things that consumers wanted from a brand were discounts (61%) and to purchase something (55%). Those two things were at the bottom of the list of why companies thought consumers connected with them. There were two other drastic differences between customer and corporate expectations: Companies thought that consumers linked with them to feel connected (64%) and be part of a community (61%) while only 33% and 22% respectively of consumers felt the same way (Baird & Parasnis, 2011). While this survey may not be definitive, it ironically shows that companies could be investing in

programs with outcomes that cannot be achieved because consumers' expectations are a world apart.

The results of the IBM survey may lead one to believe that investment in SCRM and social media is not fruitful, however there are positive impacts to be gained and times when brand loyalty has been achieved. The most successes gained from these investments seem to be centered on when a company has created a connection that builds upon an overall entire experience or when they have been able to make an emotional connection that spreads like wildfire across friend and family lists. These and some other similar cases will be covered in the next section where specific company case studies of SCRM will be discussed (Greenberg, 2009.)

2.2.4 SCRM Case Studies (The Experience)

The last discussion briefly covered whether or not investment in SCRM and social media is achieving what companies are hoping for. There are going to be companies on both sides of the debate along with a lot of analysts on each side. It could be that those companies that set an overall SCRM strategy and then use social media as one channel to enable that strategy will be overall the most successful when it comes to ROI. One such company that has traversed an entire SCRM strategy and is still claiming huge benefit is Dell computers. In 2005, a public blog chronicled experiences with a Dell laptop catching fire, leading to a large scale recall of laptop batteries. Rather than hang their heads, Dell leadership decided that they were going use this social media connection as a way to connect directly with their customer. To this end, in 2006, Dell

released a blog called Direct2Dell and in 2007 they released a site called IdeaStorm where they used the power of social media to gather customer reviews and wishes for existing or future products. Fast forward to 2012 when Dell has an active Social Media Command Listening Center and over 10,000 employees trained in social media to be Dell brand advocates online. Through their command center, Dell aggregates and processes over 25,000 conversations about Dell in 11 languages for 24 hours a day. While their effort has been a smashing success, Dell warns that they had to fully commit to this effort and use social media as a way to enhance existing customer service strategies. They also had to develop new processes and training to support the overall strategy, so the technology wasn't the end goal. Even Dell will admit that the ROI for this effort is not always clear and distinguishable from existing revenue. On the contrary, Dell believes that this strategy is required in the current marketplace to maintain existing ROI levels and brand (Rooney, 2012.)

Another company that has driven full force into CRM and SCRM for nearly a decade is Best Buy. Best Buy began its SCRM journey around 2008 by beginning to engage customers through many different channels. In 2009, the electronics giant created and launched its TwelpForce campaign. TwelpForce was essentially an aggregated Twitter feed which allowed Best Buy associates to respond to complaints and questions right from within Twitter along with allowing the community members to respond. The rapid growth of this community helped Best Buy crowd source, track, and re-share solutions to a multitude of problems. Analyst estimated in 2011 that this

initiative has led to a $5M savings in call center deflection and sales influence. Another facet of the Best Buy overall SCRM strategy was to enhance their online presence and product listings with reviews, specifications, and other useful information. While the website enhancements went well and visits to the site for information increased dramatically, Best Buy's overall online conversion rate is one of the worst in the business. In 2012, Best Buy saw over one billion visitors to its site, but only converted those visits into $2.3B in sales. The in-store conversion rate is much better with 600M visits turning in to $35B in sales. With the goal of increasing sales and gathering information directly from the visitors to their site, Best Buy decided in 2013 to merge its extremely successful rewards program (myrewardszone.com) that is about 40M members strong into its primary bestbuy.com website. Rewards zone members will earn points for product reviews and for posting their purchases to Facebook, all things that will require a logon, allowing the electronics powerhouse to track data about their members and their behaviors. Best Buy leadership is hoping that this additional information will lead to insight that will help them personalize the online experience and lead to additional conversions while on the site (Lee, 2013.) Best Buy is another company that has evolved their CRM and SCRM efforts over time as they gain new insights and technology evolves. This is another clear example that shows that these efforts require years of effort and learning to be successful.

The final case study around SCRM begins a lot like the others, with a company that begins around 2009 to increase their engagement with their customers on social

media. American Express first made its entry into the social media scene through a Twitter account (@AskAmex) to answer cardholder and merchant questions. The next step was to build a Facebook presence in order to personally connect with their customers. By 2012, the American Express effort had led to 340K followers on Twitter and 2.4M Facebook fans from the US side alone. Where the AmEx story diverges some from the others is their ability to turn this online presence into couponless deals for the constituents that sync with them. All it takes is an AmEx Sync to popular social media accounts, an exclusive merchant deal, and a qualifying purchase. For example, customers can receive exclusive merchant offers just by liking certain brands if they have synced their AmEx card to their Facebook account through a custom application. With a synced Twitter account, customers can tweet specific hashtags to load merchant deals on to their cards, e.g. with the hashtag #AmexWholeFoods, a cardholder earns a $20 statement credit with a $75 or more purchase at Whole Foods with their AmEx card (Swallow, 2012.)

In summary, cases such as these demonstrate that there may be value to be gained by continually evolving customer relationships as the technology and the customer changes. This review has moved from CRM and then covered SCRM in more detail. It has discussed the "what" and "why" for both concepts, even though the "why" isn't often backed by empirical evidence. Companies are continuing to investigate how they can use this less expensive channel to achieve profitable outcomes and enhance their already existing CRM programs. The verdict is not in yet on the overall value and

recipe for definite success, but companies will continue to search as long as customers are "hanging out" online.

2.3 Higher Education and CRM

The need for CRM has been driven by the increasing availability of choice in an online and global world. No place is that more evident than in post-secondary or higher education. According to the National Center for Education Statistics (2015), the highest enrollment degree-granting college or university in fall of 2012 was the University of Phoenix online campus with over 250,000 constituents. A very distant second was Indiana's Ivy Tech Community College System with just over 100,000 students. This statistic shows that brick and mortar universities need to be aware of their own enrollment, how it is trending, and how they maintain their customer base for a reasonable lifetime.

2.3.1 Higher Education Marketing & Areas of Focus

As public higher education institutions have been hit with the realization of declining federal and state funding, the regulation and governance of these institutions have moved off of central to an almost privatized or marketing-like model (Hemsley-Brown & Oplatka, 2006). This means that higher education has seen an overall increase in activity and expense around marketing, learning from the business-world experience and failures around management of their customer relationships. While experts and academics are debating the ethics of the privatization of public education, many

Universities have begun to hire Chief Marketing Officers and increase allocated funding to build their brand. Purdue University made marketing news in 2010 when they spent over half a million dollars on their "Makers All" campaign. While the campaign was not well received by students, staff, or alumni, it was evident that a shift had happened in that this could even hit the news (Hanover Research, 2014.)

As higher education flocks to marketing, CRM becomes an acronym rolling of the tongues of these marketing staffers. The lifetime of a university constituent is just as important and essential as that of a product consumer. At its simplest, the high-level goals of CRM in corporations is to find new customers and maintain existing so they can repeat their purchases. Similar goals can be drawn in higher education: to find new students, research funders, faculty, etc., along with retaining them for an extended period of time. Retention in a higher education institution is more of being entrenched in a constituent's life and hopefully their legacy (Bejou, 2005).

While some argue that students should be treated like customers (Bejou, 2005), others offer a contrasting opinion. They feel that students are actually the product that higher education is offering to the overall customer of society. University goals should not be to delight students, but to deliver a scholar of life that will become a skilled and contributing member of a community. In fact, they liken a student to an "employee" of the educational enterprise with faculty being the trainers or coaches on their learning journey (Franz, 1998.) While this is an interesting view (although aged) and holds some merit, the aspect of choice in higher education requires institutions to respond to this

stakeholder the same way that corporations respond to their customer-base in this virtually intimate, global, online world.

2.3.1.1 The Lifetime of a Customer

In order to draw parallels between the lifetime of a customer and that of a higher education constituent, it might be helpful to look at a framework for managing a customer at different stages of their lifetime with a company. This framework is drawn from research in interpersonal relationships and the mutual benefit that is derived from those relationships. According to Bejou (2005), "these professional and personal relationships traverse four main stages: exploration, expansion, commitment, and continuation or dissolution". In more detail:

- Exploration
    - Mutual perception of potential benefit
    - Information exchange
    - Sale made based on mutual benefit
- Expansion
    - Raised confidence
    - Ethical orientation is established
    - May produce additional sales or referrals
- Commitment
    - Building of loyalty
    - Increased satisfaction

- Continuation or Dissolution
    - Comparison of expectation to reality
    - To expansion or commitment if satisfied
    - Or on to another merchant

Moving around in these different phases can take any amount of time and lead to many different outcomes. There are also many factors that come into consideration as movement occurs (Bejou, 2005.) Figure 1 below shows how these phases interact and could be impacted at any time by a change in the overall relationship.

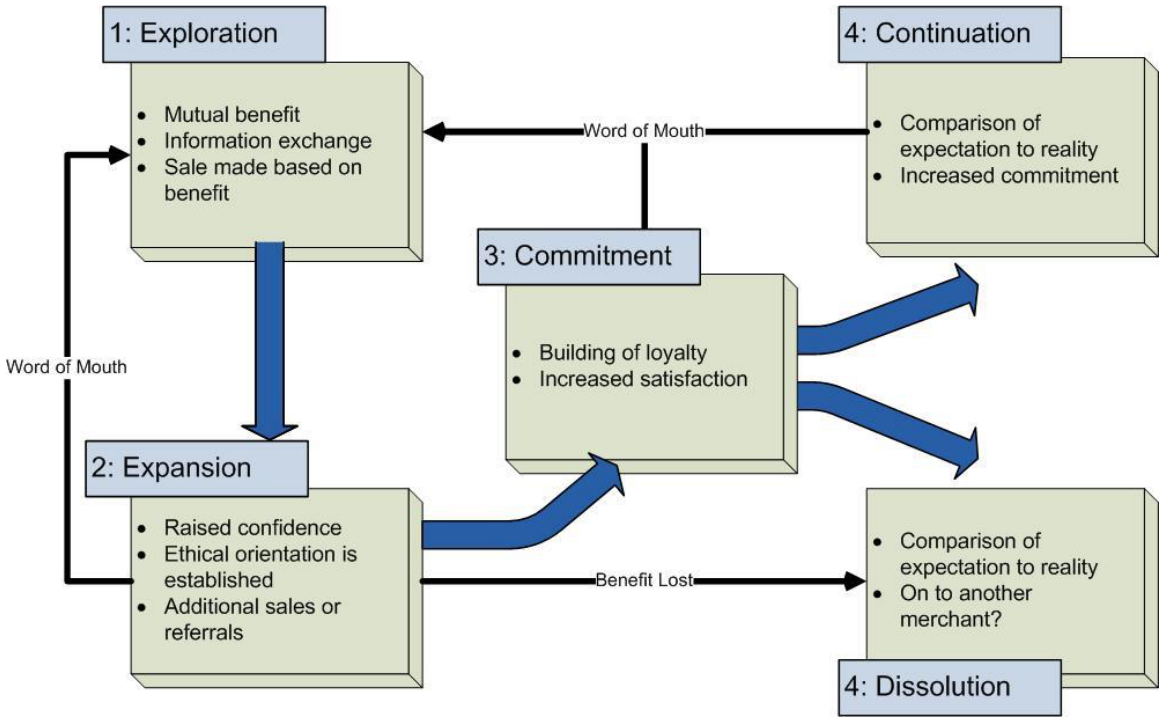

Figure 2.1 Lifetime of a Customer

2.3.1.2 The Lifetime of a Student

Taking the model mentioned previously around the lifetime of a customer and translating that to higher education students helps demonstrate how more traditional CRM can be applied. The figure below shows the traditional phases of a customer mapped to higher education specific phases.

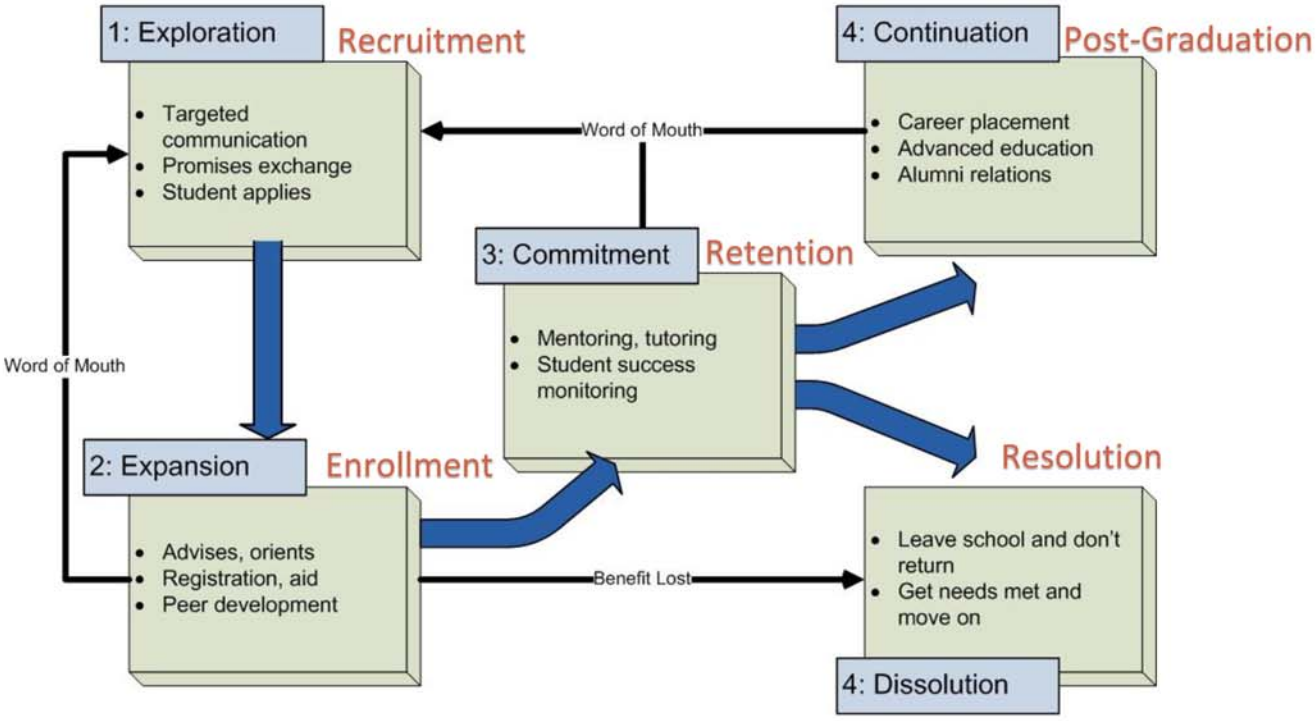

Figure 2.2 Customer Phases Mapped in Higher Education

While the framework being shown above was specifically talked about in the context of a business school attempting to manage long term student relationships, these similar concepts can be applied across many different colleges and universities along with online and community colleges (Bejou, 2005.)

2.3.2 Technology Trends in Higher Education CRM

CRM has established itself as a trend in higher education over the last several years and subsequently has been an interesting topic to watch. In 2013, Campus Technology looked at the technology related trends on campuses across the country. There were seven primary trends that were worthy of noting. The list below discusses these trends in more detail (Fredette, 2013):

1. Cloud – the movement of higher education CRM tools is moving off campus like upperclassmen. The other trend of note here is movement towards improved user experience
2. Mobility – being able to interact with systems anytime, anywhere, from any device is the next step for CRM in higher ed. Recruiters having up to the minute access to application along with empowerment to make decisions is essential
3. Predictive Analytics – Academics will be interested in using their massive amount of student data to predict success or dropouts. The current trend is to take seemingly unrelated and unstructured data to look for interesting insights.
4. Personalized contacts – Taking time to build a relationship has been key for universities. Personal contact to potential and current students along with a relationship with their helicopter parents is apparently not seen as going too far.

5. Integration – CRM vendors are enabling the connection or interfacing to many different data sources, including maps, ERP, Alumni, etc.
6. User friendly – Being able to easily produce meaningful reports has become an essential requirement rather that a nice-to-have.
7. Social Media – Having a social media presence is not enough. Using "listening" techniques to understand where students are, what complaints exists, what their parents are concerned about and what their friends are doing are essential to building a personal relationship with students, alumni, and potential donors.

While the list of trends are daunting for higher education administrators, it is clear that higher education CRM technology is benefiting from the earlier woes of corporate CRM and the technology is evolving at a faster clip than most universities can implement (Fredette, 2013.)

While the previous section looked at overall trends in higher education related to CRMs, looking at specific implementation statistics and tool sets also provides a view of where this landscape is headed. Educause Core Data Service (CDS) did an investigation in 2013 into the current landscape of CRM implementations. This study found that CRMs are the second most rapidly changing core system in higher education, right behind web content management. This is primarily due to the number of implementations and replacements going on at the time of the study. In fact, the volatility is shown by the rapid increase in CRM implementations in just three years. In

FY2010-11, only 37% of institutions had a CRM in place. That percentage rapidly increased the next two years to 56% and at the time of the study, 17% of institutions are planning on a major change in their CRM systems in the next three years. As the vendor toolsets are constantly evolving even institutions (~22%) with a less than six year old CRM systems are looking to replace in the next few years (Lang, 2014).

Even as the CRM implementations are in constant motion, so are the tool sets and vendors behind those implementations. Unlike other higher education core systems, there does not seem to be a clear winner in toolset and functionality. About 64% of the implementations from the above study are made up of the top five tool vendors. Hobsons and Ellucian are the market leaders in this space, both taking about 21% of the market share between a couple of their top tools. Talisma is the next market leader followed closely by Salesforce. Many institutions are still using a toolset found as part of the ERP suite of tools, have written something homegrown, or are using a smaller market toolset (Lang, 2014.) The outlook of future implementations and replacements will most likely lead to more clear market leadership from a fewer vendors over the next five years.

2.3.3 SCRM in Higher Education

The technical trends in higher education show that a social presence is becoming essential and part of the norm at universities. This social presence takes many forms, has many different purposes, and should align with the SCRM (or CRM) strategy of the university. SCRM as it applies to higher education seems to take a much broader view

all the way from a clearly delineated web portal for finding information to using social media like tool sets to enhance the learning experience. While the social aspect is broad and higher education social platform activity has exploded, just as in corporations there is still very little clear evidence that SCRM in higher education is an undeniable success (Hanover Research, 2014). Like early corporate attempts or even worse, higher education institutions are having trouble getting centralized on a common effort and this is heading towards a lot of duplication of effort. According to Hanover Research (2014) a 2011 social media survey of 950+ institutions showed that 96% of respondents were actively using social media. Another survey compiled by Hanover Research (2014) done at University of Massachusetts Dartmouth, shows that 98% of colleges and universities have a Facebook presence and 84% of them have an institutional Twitter account. While the jury is still out on the effectiveness, universities are going to continue to flock to these outlets because that is where they students are congregating. It remains to be seen if the students want their university there with them.

2.3.4 Higher Education SCRM Case Studies

While overall proof is missing that SCRM in higher education is having lasting impact, there are still some examples where it has provided positive outcomes and enhanced certain aspects. Georgia Southern University is using SCRM tactics on the recruitment side that is leading to positive outcomes as it builds on their personal relationship with the potential student. In a first recruiting session, while student interest is at a high, the university uses mobile devices to allow the students to build

their own customized student portal (VIP pages). The university uses these pages to gather insight about the student and for sharing personal communications around identified interests and programmatic administrative deadlines. At the same time, GSU uses predictive analytics to assign a ranking to prospective students based on how likely they are to apply. If a prospective student with a lower likelihood calls into the University or asks a question on social media, the recruitment analysts bump up their rank some to show that their interest has increased. This increase in ranking might result in a message being delivered to the student's personalized portal letting them know that GSU is interested in them or "likes" them (Fredette. 2013).

In a similar scenario, University of Southern California is listening to incoming students on social media and then adapting their strategy based on what they hear. By monitoring several channels, admissions discovered that incoming students asked the most questions about their dorm and what living on campus might be like. They then came up with the idea to have existing students do short videos about their dorm and room design to help answer questions and create a buzz in the community. This lead to a vote about the favorite dorm and USC saw their "shares" soar and engagement on the topic spike. They have decided to include this as a future strategy moving forward because it draws potential and existing students together and makes it easier for them to provide better service (Fredette, 2013.)

While there are positive instances where SCRM is being used in higher education, some stories are not yet written. For example, Excelsior College, based out of

New York, will be integrating social media game-like learning and simulation into five of its classes. A gaming company called Muzzy Lane will be partnering with the university to make the program a reality. One of the places to use this technology is in a course covering World War I history. Students will be put into a history-based simulation and then asked at decision points to be a part of the strategizing. Being able to demonstrate learning by changing the simulation outcome would be a measure of success. Excelsior is an eLearning institution that caters to mostly adult learners. They are hoping that this technology-based social interaction will help convey key learning objectives in an online environment. The university was awarded a Bill and Melinda Gates Foundation award earlier this year to explore this option for their student base (Schaffhauser, 2015.)

The three case studies discussed based in higher education show that SCRM is prevalent on different types of campuses (including virtual) and for different purposes. Again, the goals at the highest level still are to bring in new constituents and to retain them over time. Though higher education institutions are flocking to social media, it is clear that the proof of lasting impact is still outstanding and not being posted to anyone's Facebook page.

2.4 Summary

This literature review has followed a very specific path to demonstrate the value of the research that will be undertaken. The journey began by describing CRM and its

evolution from failed technical projects all the way to a thriving software industry with its sights on the clouds. The next step along the path was a venture into the social side of CRM with the continued evolution of SCRM. SCRM demonstrates the shift to customer-focus by working to seek customers in their preferred channel or environment. The final destination on the journey is how both CRM and SCRM are being used in higher education to reach the overall goals of finding new customers as well as maintaining lasting relationships with existing customers. This journey has paved the foundation of the relevance and value that can be gained by investigating the alignment of what students need and want in a social connection from their university and what their university is providing them.

CHAPTER 3. METHODOLOGY

The intent of this research was to gather information that shows how effective universities are at social relationship management in regards to its student population. The research gathered information about the importance and effectiveness all from the point of view of a student in focus areas that are meaningful to them. These results were compared across the different audiences to find strength of alignment across those audiences. Respondents were also asked to rank a subset of social media tool categories with example tools and which of them should be used by the university to connect to students.

3.1 Methodology

The methodology of this research had two main facets: a model for the areas of focus in regards to student relationship phases with their university and a similar corporate survey concept where IBM looked for alignment between the consumer and company leadership. Both of these facets were discussed in the literature review and are also mentioned here.

The first component of the methodology involved using a model for customer relationship stages and using that model to apply to the lifelong relationship that a student has with their university. The main stages of this relationship are: exploration,

expansion, commitment, and continuation/dissolution. In general, one can liken these stages to very specific times in a student's career, both pre and post their academic experiences (Bejou, 2005). The specific student-related stages are shown in the following table.

Table 3.1 Higher Education Customer Stages

STAGE	HE STAGE	ACTIVITIES/OUTCOMES
Exploration	Recruitment	• Targeted communication • Promises shared • Student applies
Expansion	Enrollment management	• Advises and orients • Class registration • Financial aid • Peer development
Commitment	Retention and progression	• Mentoring • Student success monitoring • Internships
Cont. or Dissolution	Post-graduation	• Career placement • Alumni donor relations • Advanced education

The research survey asked questions around social customer relationship management at some of these different times in a student's relationship with the university. The goal was to compare from the student vantage point how important a relationship is

during that time to how effective the university is at managing the relationship at that same time.

The second aspect of the methodology was a strong similarity to a survey that IBM performed in 2010, attempting to assess if companies' efforts in social customer relationship management were hitting the mark of high consumers expectation. In general, the survey found that companies were putting effort into social media strategies because they believed that customers connect with them because of advocacy to the brand, and to find out about new products. In general, customers had very different reasons for the connections and their loyalty was not evidenced by a social media connection. The following figure shows IBM survey results and the areas where the survey attempted to look for alignment (Baird & Parasnis, 2011). This research project used a similar concept in that it will look for alignment between the consumer (student) and the leadership (university administration) on the importance and effectiveness of SCRM efforts at the university.

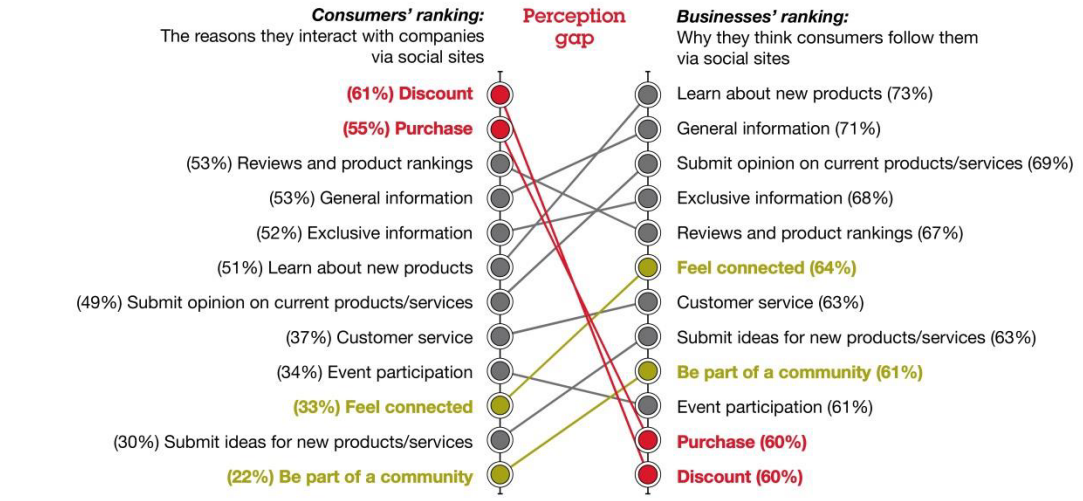

Figure 3.1 IBM Survey Showing Customer and Business Alignment

In summary, this research was completed using a survey instrument that was the same for all participants. It was written from the vantage-point of the student and attempted to find alignment amongst the different audiences around the important and effectiveness of social relationships. This methodology was set by using previous work around the stages of the student-as-a- customer relationship along with a prior corporate survey performed by IBM Research.

3.2 Credibility of the Researcher

The credibility of the researcher was established through the thoroughness of the research and understanding of the subject matter. This was accomplished through careful formation of questions and avoidance of any leading or biased questions. A

review of the survey questions was performed by several staff that are subject matter experts from the Marketing and Media department at Purdue University, as well as by a survey expert from the statistics department.

3.3 IRB Approvals

IRB approval was a necessary component of this research because of its involvement with the human participants. Steps were taken to protect the anonymity of the participants and allow them to withdraw from the survey at any time. The level of IRB approval that was sought was the exempt level as there was no perceived threat to the participants. The IRB exemption was granted under protocol 1601016993 (presented in Appendix B).

3.4 Survey

The survey instrument itself was built using a Likert-like model that measures attitudes. Likert scales are built upon frequency using fixed choice response formats and are designed to measure attitudes or opinions. This scale assumes that the intensity of agreement/disagreement is linear and the attitudes can be measured/compared. Respondents were offered a linear scale of 5, 7, or 9 options with a middle neutral point being neither agreement nor disagreement (McLeod, 2008).

The specific survey used for this research was paired sets of Likert-like scales around stages of student engagement with the university. The pairs consisted first of

asking about the importance of social engagement at a particular stage, and then about the effectiveness of the interactions at that same stage. This paired model allowed for comparisons both across the pairs for the same audience and across audiences for both pairs. This comparison worked best if all audiences were taking the same survey. This also required requesting demographic data that helped segregate the different audiences to be compared. The survey was constructed from the vantage point of the student so that alignment could be determined. This survey construct was the most viable to gauge overall effectiveness of the social relationship management being provided by Purdue University to its students.

3.5 Participants

The participants for the survey had to be identified before the data can be collected. The first group identified was students of Purdue University, both graduate and undergraduate. The next point for comparison was to send the survey to university faculty and university administrators in varied departments and colleges. It also made sense to send the survey to university administrators that are in central offices that have a lot of interactions with students: Admissions, Financial Aid, Marketing & Media, Student Organizations, etc. Identifying these administrators by their role was helpful to do additional analysis.

3.6 Summary

This chapter explored the methodology that was used to accomplish the research laid out through the introduction, research question, and the review of relevant literature. The survey review by subject matter experts, adjustments made, and IRB approval show that the research was conducted in a reliable manner, helping to validate the results that follow.

CHAPTER 4. DATA ANALYSIS

This chapter discusses the data analysis portion of the research. It outlines how the data was collected via Qualtrics and how it was analyzed in that statistical tool. It also provides high level view of the demographics of the survey respondents along with the analysis of each of the hypotheses proposed.

4.1 Data Collection

The data for this study was gathered via the Purdue University sponsored, cloud-based, survey tool, Qualtrics. Individuals on the student side received an email solicitation and also could have received the solicitation via university social media accounts. Faculty and staff were sent the same solicitation email from someone that they know personally to help them trust that this was a meaningful survey. Individuals that were not yet 18 years of age were asked not to participate in the survey as the survey was not approved by IRB for usage in the age group. All of the questions in the survey required a response to help achieve as many completed responses as possible.

4.2 Survey Instrument

The survey instrument itself, along with the introductory information sheet, can be found in its entirety in Appendix A. The survey was broken up into six different

blocks of information. The first block was the introduction and provided the information sheet that has been reviewed by IRB. It discouraged those under 18 from taking the survey, along with telling respondents that their participation was voluntary and they could quit at any time. It also mentioned that a completed response could result in winning a drawing for one of two $25 Starbucks gift cards.

The second block of the survey focused on gathering basic demographic information from the respondents. The first question was around the primary university role of the individual and broke them up into faculty/staff and different categories of students. Gathering college information was next for students and staff/faculty were asked for the college or department in which they are employed. Students were then asked about the academic classification at the university. All individuals were asked to provide their gender as the final question in this block.

The next block asked participants first if they felt comfortable enough with social media categories or tools to pick and rank (from their perspective) the top 3 categories of tools that the university should be using to connect with its students. If they responded that they did not feel like they know enough, they would then skip on to block three. Those that wanted to push ahead to rank the top three were asked to drag and drop three already existing choices or add one of their own under “Other” if they felt one is missing. There were ten existing options and one fill in text response that could have been ranked by the participant. The options that they selected from included:

a. Social/Business networking sites- Facebook, Google Plus, CafeMom, Gather, Fitsugar, LinkedIn
b. Micro-blogging sites- Twitter, Tumblr, Posterous
c. Collaboration tools- Wikipedia, WikiTravel, WikiBooks
d. Photo sharing sites- Flikr, Instagram, Pinterest, SnapChat
e. Video sharing/Streaming sites- YouTube, Vimeo, Viddler, iTunes
f. Virtual worlds- Second Life, World of Warcraft, Farmville
g. Location based services- Check-ins, Facebook Places, Foursquare, Yelp
h. Widgets- Profile badges, Like buttons
i. Social bookmarking and news aggregation- Digg, Delicious
j. Learning/Progress Tools – Hotseat, Signals, Mixable, Passport, Convoy
k. Other _____

Block four focused on a Likert-type scale around the importance of the university using social media tools to interact with students at different points in a student's relationship with the university. This block was a table/matrix that looked at a five-level importance scale (from extremely important to not important at all) at six different points in a student's career. These six different phases have been identified as those that can gauge whether the relationship between the individual will continue on or diminish.

The last block that asked for a response is block five. This block was almost an exact copy of block four except for its change from focusing on importance to effectiveness. It also added another option beyond the five levels that allowed the respondent to say that they are unaware of how effective the university is in using social media to connect with its students. This option allow respondents who were unsure to not have to guess at how the university was performing.

The final block thanked the users for the participation and again gave them contact information to use if needed. It also provided them a separate survey link to sign up for the drawing for the two gift cards. This separate link severed the connection between the two functions, allowing no connection between the response and the drawing.

4.3 Data Manipulation/Validation

Data was exported from the survey tool in comma-separated values (CSV) so that it could be analyzed. The export was cleansed from partial responses and columns of information that were not being analyzed. The data around rankings and demographics was analyzed in Excel with very specific graphic comparisons. The numerical Likert-like data was analyzed in a more statistical fashion in IBMs Statistical Package for the Social Sciences (SPSS).

The data was imported into SPSS for further analysis. Direct results from Qualtrics were used for the analysis except for block three around ranking the top three tool categories/tools. These top three rankings align closely with the importance Likert value scale and can be translated for validation through comparison. This comparison was used as survey validation as one of the option categories ties to one of the phases in a student's relationship with the university. Translating the top three chosen categories to a Likert-type scale with the top choice being extremely important (1), the second choice being very important (2) , and the third choice being moderately important (3)

will allow this result to be compared against the importance value for the phase around academic success progression. If a respondent chose in block three that one of their top three categories/tools that the university should be using to connect with students is "Learning/Progress Tools (Hotseat, Signals, Mixable, Passport, Convoy), then the survey was validated by comparing that result with the same individual's response under block four, where they rated the importance of connection with students for the purpose of academic progression. This translation of the responses strengthened the overall survey result in that it provided a level of data validation through a similar question being asked in a different way.

After testing the survey, a suggestion was taken into consideration and added that allowed people who were not aware enough to rate the effectiveness of the performance of the university to choose that option, extending the Likert-like scale from five options to six. The use of that option was noted and analyzed, but not taken into account when evaluating the means of those responses.

4.4 Demographics

This next section discusses the overall survey instrument, the response rate, and the breakout of who responded to the survey. The survey was active for two weeks, immediately following the Spring break on campus. The number of completed responses was 1330. The survey was sent to around 30,000 faculty, staff and students, giving a 4.4% response rate. While that response rate seems low overall, that does not

take into account emails that weren't delivered or accounts that were not active. Furthermore, the response rate was more statistically significant than expected. There were 923 people that signed up in the alternate survey to be included in the random drawing for one of two $25 Starbuck's gift cards. Overall, the breakdown of the respondents by university role included 1% faculty, 2% Nontraditional students, 7% staff, 31% Graduate students, and 59% Undergraduate students. The pie chart below shows this visually.

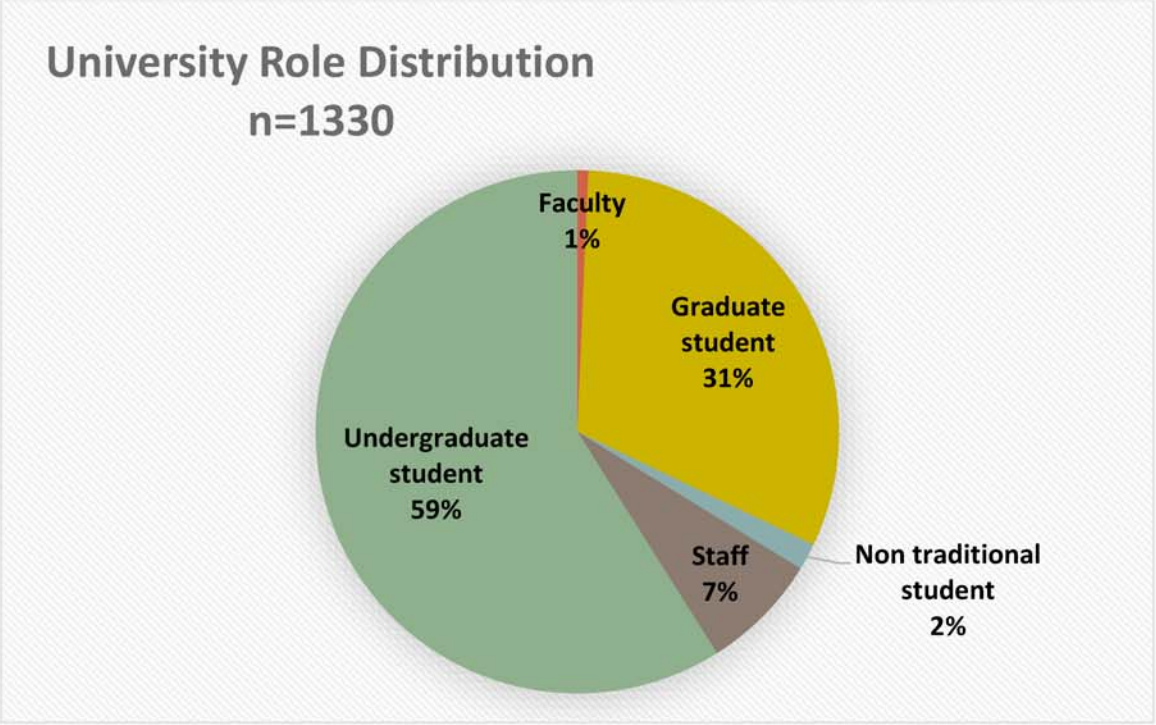

Figure 4.1 University Role Distribution

The next facet of demographics analyzed was the gender of the respondents. Overall, there were many more females (900, 68%) that responded to the survey than

males (417, 31%). There were less than 1% of the respondents that did not wish to include their gender (13). The pie chart below shows this visually.

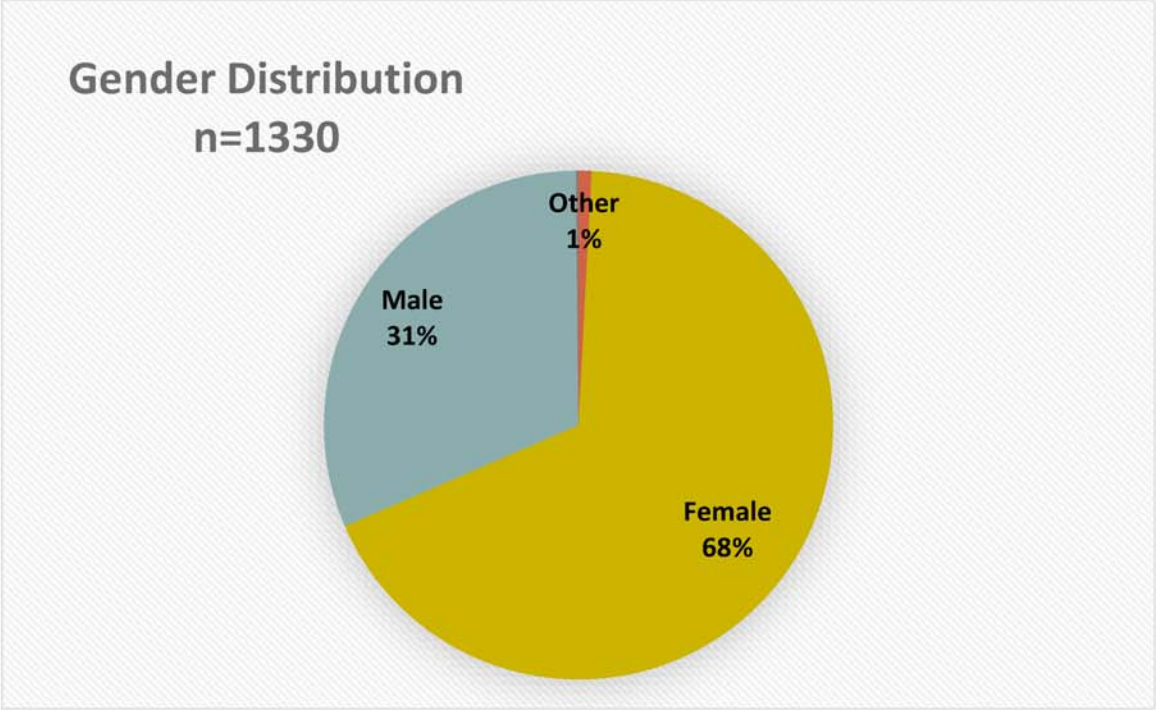

Figure 4.2 Gender Distribution

One of the final demographic views of the respondent group is around the academic classification of the students. Overall, the student response rate made up 1224 of the total 1330 responses or over 92%. The major academic classifications were represented at similar levels. Undergraduates made up 59% of the total respondents (n=1330) and 64% of the student respondents (n=1224). Those undergraduates were broken up into smaller groups with the freshmen making up 16% (195), sophomores 17% (209), juniors 15% (186), and seniors 16% (197). Overall, graduate students made up 31% of the total respondents (n=1330) and right around 30% of the student

respondents (n=1224). That 31% of graduate students were broken out as 18% doctoral students and 13% masters students. The smaller groups of student segmentation were 5% professional students (66) and a very small (<1%) group of non-degree seeking/other students. The pie chart included below helps with the visualization.

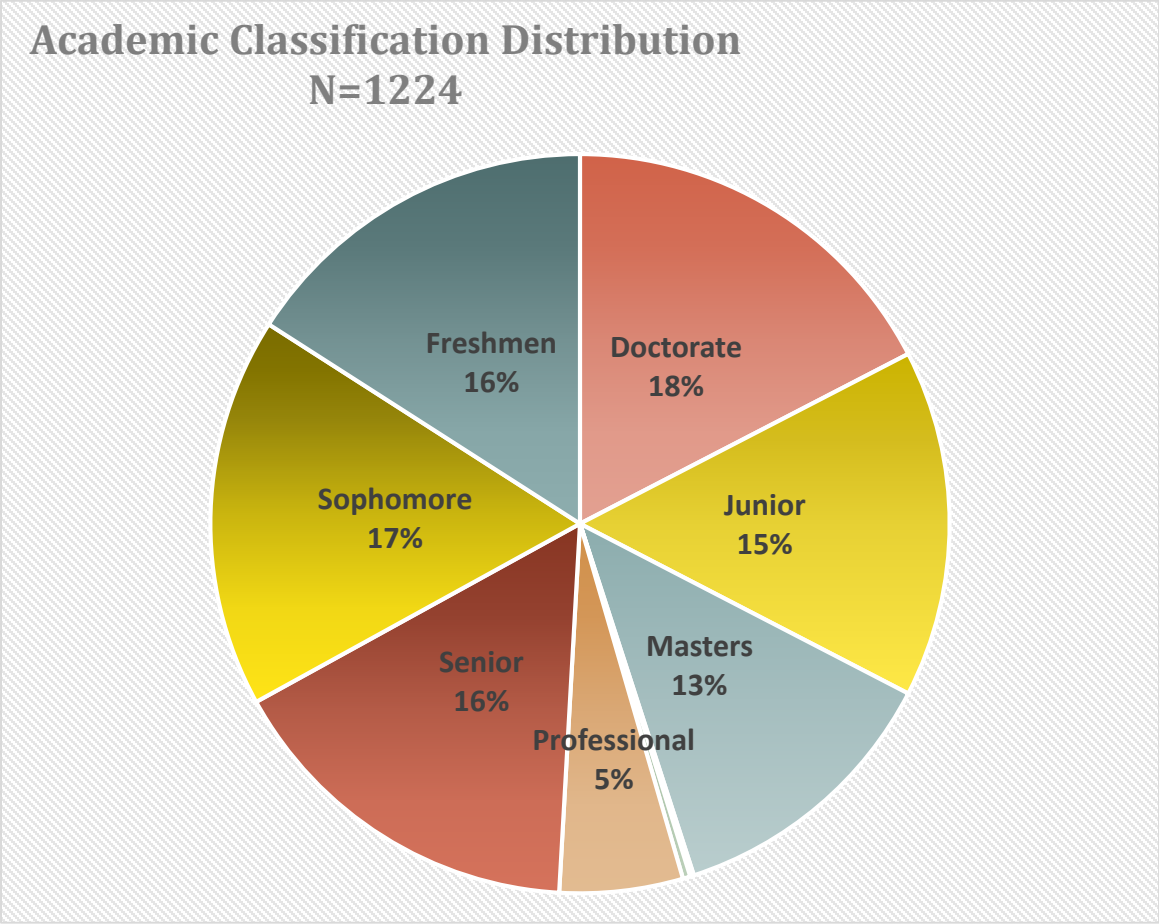

Figure 4.3 Academic Classification Distribution

While the survey also asked both staff/faculty and students which department they were a part of, this information was not answered consistently. The comment was made after survey testing to include this is a multi-select option rather than an only one

answer option. When that change was made, that made it a not required field that was not answered consistently. Some of the respondents did answer and basic analysis follows. There were 102 students that answered the question around what college they were a part of. The largest percentage were those in the College of Engineering, making up 31% of those overall. The next largest group of students belonged to the College of Liberal Arts, making up 13% of that 102. Since the number of students that consistently answered this information was minimal, this aspect will not be considered further, but overall there were students from all colleges that answered the survey.

Of the staff and faculty that answered the survey (106), there were 56 that considered themselves a part of an academic college and 50 that selected other as their home department. Those that selected other were given the opportunity to respond in text with their department. There were many different departments represented including Student Life, Enrollment Management, VPIT, University Development, Comptroller, Marketing and Media, Bursar, and the Alumni Association. The respondents were sprinkled in these departments in a seemingly equal fashion with no department making up a major portion of the responses.

This section covered the demographics of the survey respondents, including their university role, their gender, and academic classification for students. These aspects will be analyzed statistically in the next section and then conclusions will be drawn from that analysis in Chapter 5.

4.5 Data Analysis

The previous sections in this chapter covered the overall survey instrument, the data collection mechanism, and the overall demographics of the survey respondents. This section will dive into the statistical analysis of the actual data, viewing it in different ways, across some of the demographic groups.

4.5.1 Analysis of Social Media Tool Category Rankings

The third block of the survey was set up to get a ranking from respondents of what they believed were the top three social media categories and tools that the university should be using to connect to students. Some survey test respondents felt as if some would not be familiar enough to even do this ranking. So, there was an initial question before the ranking that allowed the respondent to skip through to the next section if they felt they wouldn't be able answer the question. Of the 1330 respondents, only 72 (5.4%) of them did not feel comfortable answering this question. All others answered the question and ranked the top three tool categories. Of those that did not feel comfortable answering, the majority (97%) of them were students, both graduate and undergraduate.

The overall ranking results indicated that social and business networking tool sets were the top overall choice for the tool category and the respondents felt these tools should be used by the university to connect to students. It was chosen 833 times as the number one rank, 212 as the number two rank, and 140 times as the third top tool category. The next three chosen tools/tool categories overall were video

sharing/streaming sites (703 times chosen in top 3), photo sharing sites (599 times chosen), and microblogging sites (558 times chosen). Surprisingly, things like collaboration tools and learning/progress tools were much further down on the list in rankings, potentially indicating that respondents do not link social networking type tools with student academic progress. The graph below is a visual representation of the ranking results, showed in a stacked manner for each ranking set.

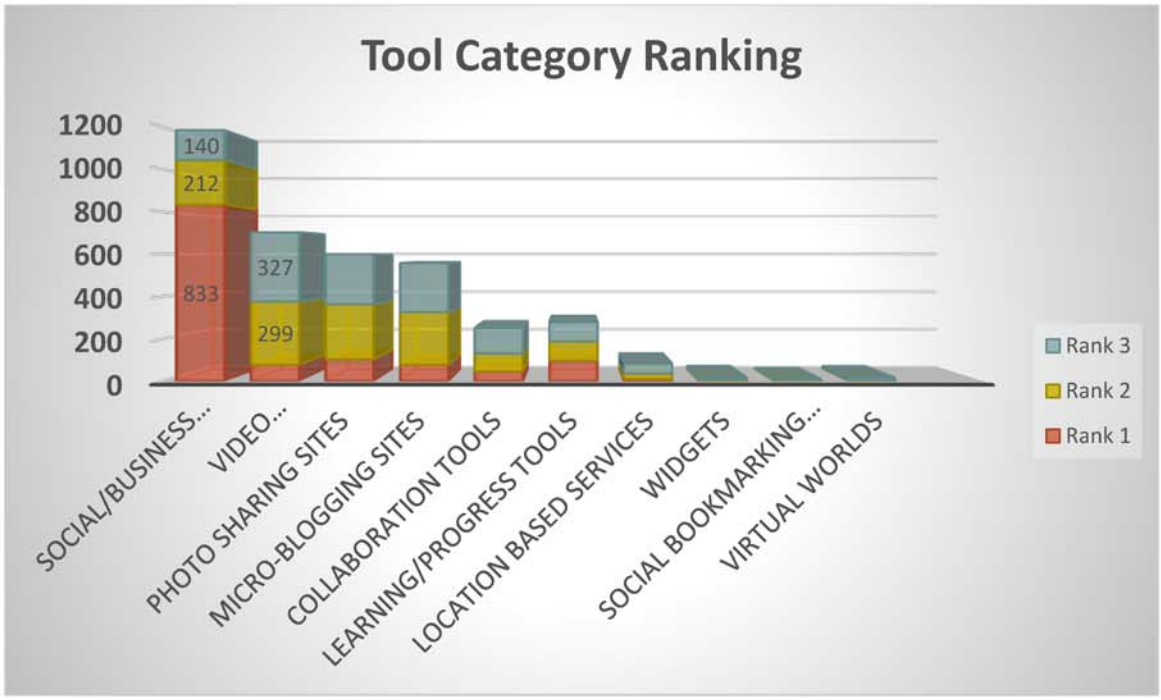

Figure 4.4 Tool Ranking Results

The next question asked was if the different respondent groups viewed the rankings differently by demographic group. When looking at the responses for the top ranking tool category only by university role (when graphed on a 100% view), it was clear that there are very few differences. In more detail, undergraduates chose

social/business networking sites as the top ranking category 477 times which is about 65% of the undergraduate total for the top ranked tool. Graduates chose this category 73% of the total. In all role cases, the social/business networking sites were the top choice by over 50% of the total. Another interesting choice was the photo sharing sites that made it as the top choice for 16% of the staff and 10% of undergraduates. This showed the evolution of the newest social media tools like SnapChat and Instagram that have become very popular in the last two years. The graph below shows the 100% plot of the top ranked tool categories by university role of the respondents.

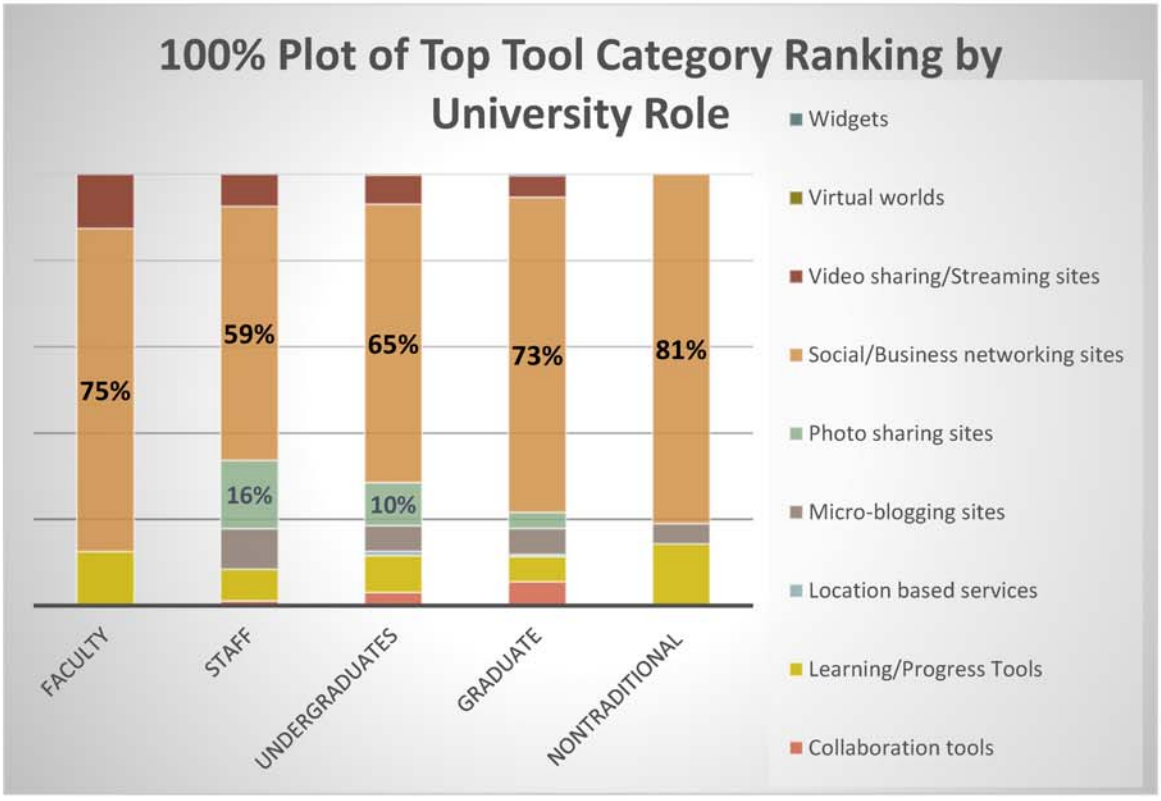

Figure 4.5 Top Rankings by Role

Similar analysis was performed by other demographic attributes like student classification or gender. In this case, the results were so overwhelming towards one top ranking option, that there was little difference between the overall proportions for the different ways of slicing the data. Further analysis was done to statistically compare results across different demographic attributes in the next two sections around the importance and effectiveness of using these types of tools at different times in the student university relationship.

4.5.2 Analysis of Importance

The next step in data analysis was to statistically view the data around how important the respondents felt it was for the university to connect to students during six very specific times in the university relationship: admissions/recruitment, course enrollment/registration, academic progression, preparing to graduate, searching for a job, and as an alumnus. These are likened to the major phases of the customer relationship mentioned in the methodology and literature review at which the relationship is evaluated and changes are made. This data was analyzed by first an overall view of the results and then a one-way ANOVA to understand if there are significant differences between the different demographic groups. The ANOVA determined if the null hypothesis should be rejected, but it did not determine between which groups the difference between means exists. A Tukey Post Hoc test was used for that additional information. The data was analyzed for each of these phases against the

university role, gender, and student classification. There was a hypothesis for each one of these phases and factors.

The first step of analysis was to compare the mean of the respondent answers, rating between one (very important) to five (not at all important). Here is the table of the resulting means by each of the phases mentioned above.

Table 4.1 Importance Result Means by Phase

N=1330 STUDENT RELATIONSHIP PHASE	RESULTING IMPORTANCE MEAN
Recruitment/admissions	2.04
Course enrollment/registration	2.83
Academic progression/success	2.91
Preparing to graduate	2.62
Searching for job	1.97
Alumnus	2.25

The closer to one the mean was, the more important the respondents rated that phase for the university to connect with the students via these social mechanisms. Based on these results, the respondents mean tell us that searching for a job is the most important time to connect, followed by during admissions. The next analysis looked at

the same mean results under three different hypothesis sets: university role, gender, student classification.

The first further investigation was comparing the mean importance for each of the university roles to determine if there were difference between those groups. The related hypotheses are:

$H_{0\ Role:}\ \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6$ $H_{a\ Role:}$ at least one mean is different

At a significance level of .05, there were four (of the six) of the importance means that show significant difference among the university roles. For example, Question 1 relates to student connection during enrollment. It showed a P-value of < .05 and an F-value of 9.516. The comparison of these values show that the null hypothesis could be rejected. The differences among the groups were shown in the following student relationship phases: Recruitment and admissions, Course enrollment/registration, Academic progression/success, and alumnus. The university role importance means did not show significant differences when students are preparing to graduate and searching for a job. In these cases, the respondent results were not significantly different, but overall the null hypothesis was rejected. The detailed statistical outputs are attached later in Appendix D. The differences between the groups and specific phases are shown below.

Table 4.2 Groups with Differences in Mean

STUDENT RELATIONSHIP PHASE	GROUPS THAT SHOWED DIFFERENCES
Recruitment/admissions	Staff – Undergraduate students
	Staff – Graduate students
Course enrollment/registration	Staff – Undergraduate students
	Staff – Graduate students
Academic progression/success	Graduate – Undergraduate students
	Staff – Graduate students
Preparing to graduate	No difference
Searching for job	No difference
Alumnus	Staff – Undergraduate students
	Staff – Non traditional
	Graduate – Undergraduate students

The next demographic analysis done was to look for difference among the different genders of the respondents. A similar one way ANOVA and Tukey analysis was performed against this aspect. The related hypotheses are:

$H_{0\ Gender:}\ \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6$ $H_{a\ Gender:}$ at least one mean is different

Again, the results showed that there were significant differences at .05 confidence level between the gender groups and their perception around importance of

connecting to students during different phases. For example, during the recruitment and admissions phase, male respondents indicate a mean of 2.2 while female respondents resulted in a mean of 1.96, indicating that a connection during this time is more important to female respondents than it was to the male respondents. These means showed an F-value of 7.123 and a P-value of <.05, showing that these differences are significant. All but one of the importance means indicate differences when sliced by gender. During the alumnus phase the analysis did not show significant differences among the gender of the respondents. Since there were differences in at least one of the means, the null hypothesis was rejected. No table is needed in this case as there are difference among the five remaining areas between males and females.

The final analysis of the importance aspect was among the student respondents by digging in to their overall classification. The role analysis showed some difference between graduates and undergraduates, but this analysis will look at potential differences within the student group and with more detail. The related hypotheses were:

$H_{0\ Class:}\ \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6$ $H_{a\ Class:}$ at least one mean is different

The analysis showed that there were significant differences in importance based on respondent answers at only one phase in the student relationship, as an alumnus. For example, the F-value for importance at the alumnus phase is 5.144 and the P-value

is < .05, leading to rejecting the null hypothesis at .05 confidence level. The resultant table is below.

Table 4.3 Groups with Differences in Mean

STUDENT RELATIONSHIP PHASE	GROUPS THAT SHOWED DIFFERENCES
Recruitment/admissions	No difference
Course enrollment/registration	No difference
Academic progression/success	No difference
Preparing to graduate	No difference
Searching for job	No difference
Alumnus	Masters – Freshmen
	Masters – Sophomore
	Senior – Freshmen
	Senior - Sophomore

This completed the overall data analysis of the importance perspective of the study. Chapter 5 will include the conclusions that were drawn from this analysis. The next step is to do very similar statistical analysis for the effective perception and understanding how the different respondents perceived the university is performing.

4.5.3 Analysis of Effectiveness

The data analysis around the effective block of questions looked very similar to that of the importance with one key difference: respondents had the chance to select a sixth option in the Likert-like set if they did not have enough awareness of how the university is performing at connecting with students through social medial tools. This additional option essentially did not get included in the ANOVA and Tukey analysis. It is almost considered an unanswered question by choice. However, it is interesting to note additional details around when that additional value was selected before diving in to the statistical analysis. Overall, a fair number of respondents answered that they did not know enough to rate the effectiveness of the university during the different student phases. The admissions/recruitment phase had 253 respondents that chose the extra option. This was the lowest frequency of that choice being used with the alumnus question have the greatest with 445 respondents opting out. Of those 445 respondents, the majority of them were students with 253 being undergraduates and 152 being graduates. It is interesting to note that only 133 respondent answered that they could not speak to the effectiveness during all six of the student phases, again with most of those being students.

The first statistical analysis completed was looking at those that answered with their perception of how the university performed (effectiveness) at connecting with students during the six phases of student relationship. Overall, the mean results were higher than the results for importance, indicating that the university was not performing

to the level of importance based on the perception of the respondents. The first step of analysis was to compare the mean of the respondent answers, rating between one (very effective) to five (not at all effective), not including those respondents that opted out of answering. Here is the table of the resulting means by each of the phases mentioned above.

Table 4.4 Effective Result Means by Phase

N=885 - 1077 STUDENT RELATIONSHIP PHASE	RESULTING EFFECTIVENESS MEAN
Recruitment/admissions	2.80
Course enrollment/registration	3.56
Academic progression/success	3.49
Preparing to graduate	3.34
Searching for job	3.04
Alumnus	2.76

The lower the mean value, the more effective the university was perceived to be in connecting with students via social media during that specific time/phase. According to the resulting perceptions, the university was most effective at connecting when students are alumni (2.76) than at any other time, with a result between somewhat effective and moderately effective. These results also indicated that the university was perceived to be the least effective at connecting with students during course enrollment

and registration (3.56), with a result between moderately effective and slightly effective. Overall, these results showed that importance and effectiveness were not matching in the perceptions received during this study.

The first more detailed statistical analysis done was to determine if there are significant differences among these perceptions as compared to university role. The analysis done was a one-way ANOVA to determine if there was significant difference in the means of the different roles and then a Tukey analysis to see which groups differed. The related hypotheses are:

$H_{0\ ERole:}\ \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6$ $H_{a\ ERole:}$ at least one mean is different

The ANOVA indicated that there was only one student phase that showed an F-Value and P-Value at a level showing significant difference in the means. Since there was one mean that showed significant difference, the null hypothesis was rejected. The table below shows the summary of where the difference was found.

Table 4.5 Groups with Differences in Mean

STUDENT RELATIONSHIP PHASE	GROUPS THAT SHOWED DIFFERENCES
Recruitment/admissions	No difference
Course enrollment/registration	No difference
Academic progression/success	No difference
Preparing to graduate	No difference
Searching for job	No difference
Alumnus	Graduate – Undergraduate

The next statistical analysis completed was around investigating the differences between mean effectiveness by the gender of respondents. The related hypotheses are:

$H_{0\ EGender:}\ \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6$ $H_{a\ EGender:}$ at least one mean is different

A similar analysis was performed and the analysis showed no significant difference in the means of effectiveness by gender. The P-Values of the six phases ranged from .458 to .988. All of these were not below sigma, so the null hypothesis was unable to be rejected.

The final statistical test done on this data was to perform the same tests against the student respondents by their academic classification. Again, the test was to determine if there were significant differences in the means and then determine between which groups. The related hypotheses are:

$H_{0\ EClass:}\ \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5 = \mu_6$ $H_{a\ EClass:}$ at least one mean is different

In this analysis, the ANOVA showed a significant difference by student classification only during the alumnus phase. The F-value was 2.647 and the P-value was .007. This would reject the null hypothesis at a .05 confidence level, however a Tukey analysis evaluating between which groups differences exist was unable to see significant enough differences between the different groups. This mix in results is supported by the fact that there was a slight difference during this phase between

graduates and undergraduates, however this difference minimized when looking at the detail amongst these groups.

Overall, the analysis on the effectiveness of the university at connecting with students during different times in their university relationship showed that almost all of the demographic groups align in their perceptions.

4.5.4 Survey Validation Analysis

One of the best ways to validate a survey was to plant a similar question in two different places and check for a match in the results. A validation was designed into this study as part of the ranking of different social media toolsets and the importance of connecting to students during a particular phase. The toolset results for Learning/Progress Tools aligned with the importance of connecting to students during their academic progression/success phase. A quick paired sample T-test was performed against these results, both with a translation of the data and without a translation. The related hypotheses are:

$H_{0\ \text{Validation:}}\ \mu_1 = \mu_2$ $H_{a\ \text{Validation:}}\ \mu_1 \neq \mu_2$

When the data was compared just by the respondents who ranked Learning/Progress tools in the top three choices of their ranking (N=279) without translation of the other values, the P-Value was .001 which is less than .05 and would lead to rejecting the null hypothesis. However, when the other values are translated matching the Likert-like one to five scale used for the importance ratings, the P-Value

shows a much higher value leading to not rejecting the null hypothesis. If the null values on the ranking are translated to a four (Not very important) the P-value becomes .962. When translated to a five (Not at all important), the P-Value becomes .687. This further translation and analysis led to the ability to check the validity of the study in one area that was not evident to the respondents.

4.6 Data Analysis Summary

This chapter discussed in detail the survey instrument and the deployment strategy. It also discussed the demographics of the study respondents. It then delved into analyzing the data and what could inferred from that analysis. The next chapter brings the study full circle by bringing this data analysis together with the results of the overall study and what other research could be looked at next.

CHAPTER 5. FINDINGS AND CONCLUSIONS

The final chapter of this study will bring full circle the research question, the survey, the data analysis, along with overall conclusions that can be drawn from this body of work. The very last portion will also discuss what next steps would be for related work that could further the knowledge gained from this study, or move it into exciting new directions.

5.1 Findings and Discussions

This finding and discussions section will look at the detailed data analysis and reiterate the results and what they mean to the overall study. In a sense, this is where the analysis gets placed into context and can be discussed in terms of the research question.

5.1.1 Ranking Discussion

Respondents were asked to rank the most popular social media tool categories by dragging the top three tool categories into a selection box. The top tool category was the most important toolset that the university should be using to connect with students from their view. The toolset that was chosen as the top and as the most selected in the top three (1185 times) was the social and business networking sites. These sites include

Facebook, LinkedIn, and GooglePlus. These are the sites that are popular for networking, connecting, sharing events, and photos. This type of site has also been around for several years, so it isn't surprising that faculty, staff, and students chose it in very similar proportions overall. There were also very little differences in overall proportions when looking at the different academic classifications of students.

While the top tool was social/business networking, video streaming and sharing sites was the second most-chosen toolset into the top three with 703 votes. This makes sense as video sharing is one of the ways that faculty connect with students consistently, mostly through sharing of lectures and learning materials. Closely related to this is the next tool category with 599 votes, photo sharing sites like SnapChat, Instagram, and Pinterest. These choices support the nature of the student of today: always connected and visually inspired. Connecting with students of today requires the ability to tell stories with pictures rather than with words alone.

Surprisingly, learning and progress tools were not chosen very often into the top three toolsets. It could be because the tools listed under that category were very specific, Purdue-developed tools that may not be recognized by staff or even some students. Or it could be that they were so much like the other listed toolsets that they were indistinguishable.

5.1.2 Importance Discussion

The next findings to discuss were under the block that covered the importance of using social media tools at different phases in the student-university relationship.

This was a Likert-like question ranging from “extremely important”= 1 to “not at all important”= 5. There were several phases that showed significant differences the different demographic groups. The first of those was the differences that were found among the different university roles. There were significant differences between staff and the student groups in the following phases: recruitment/admissions, enrollment/registration, academic progression, and alumnus. In all of those phases the staff mean was lower than that of the student groups, meaning that the staff respondents felt that it was more important than the students did for the university to connect with the students during that phase. This made sense as the staff that filled out the study worked directly in business units that support student functions during those phases – enrollment management, development/engagement, advising, etc. During the academic progression phase, there were also significant differences between the graduate student and undergraduate student groups, with the undergraduates believing that connection is more important than the graduates believed. This could be evidence that undergraduates are more dependent than the graduates and that the graduates are expected to be self-reliant.

The next finding was around the differences in importance found by looking across the gender of the respondents. When looking at importance of connection during student relationship phase with the university, there were significant differences in all of the phases except for the alumnus phase. In all of the phases with differences, the female group answered with lower means, indicating a belief that connection is

more important than did males. This could be indicative in general that females believe that connection is more important than males do, regardless of the context.

The last importance demographic to draw a finding from was looking further into the student group by academic classification detail. The results were interesting in that they showed complete alignment among the different classifications except for in the very last phase, alumnus. This phase showed significant difference in responses from seniors, master's students from freshmen, sophomores. In these differences, the masters and senior students felt that connection during this phase was more important than the freshmen and sophomore students. This made sense as the students further in their academic career are thinking more about staying connected after graduation.

These findings around the importance of connection showed some interesting alignment among the different groups, but nothing that seemed beyond a reasonable explanation. The next section will look at the same findings around how the university is performing against those expectations.

5.1.3 Effectiveness Discussion

The findings section began with the ranking discussion and then moved on to the importance discussion. The next step in summarizing the knowledge gained is to discuss the outcomes from the effectiveness discussion. Once respondents answered how important it was for the university to connect via social media tools with students at different times in their university relationship, the respondents then had to answer on a Likert-like scale how they felt the university was performing at connecting during those

same times. When looking at the university role, there were very few differences amongst the respondents. The only phase that showed significant difference was during the alumnus phase, between graduate students and undergraduate students. The graduate students felt that the university was performing better than the undergraduates did. This could be driven by the graduate students having been alumni from their undergraduate institution and just feeling more connected.

The next finding was related to the gender of the respondents. Were there differences in how the survey was answered by the different gender groups? The data analysis indicated that there were no significant differences in how the gender groups believed that the university was performing against perception. In fact, there were two phases of the student relationship where the mean for males and females were exactly the same. This was a case where the genders were in synch in their perceptions.

The last demographic analysis to be discussed was the detail around the student group through their academic classification. The data analysis and the earlier role finding between graduates and undergraduate during the alumnus phase would lead one to believe that there would be some difference amongst the student groups. The ANOVA analysis pointed to a potential significant difference during this phase, but the Tukey analysis did not point out a significant difference between the groups. Overall, this finding section showed agreement amongst nearly all of the respondents, across the demographic groups. The next section will bring all these findings together into the conclusions that can be drawn.

5.2 Conclusions

The research question for this study was formed around the concept of alignment amongst the different constituents of the university and their perceptions around the importance and effectiveness of the use of social media tools to connect with the student populations. This connection was framed based on six different phases of the student-university relationship, similar to a model around the different phases that a customer goes through with any service or product provider. Statistical analysis on the survey data showed that there was not complete alignment in many of the phases on importance and there was more alignment in most the phases around effectiveness. The overall view from the entire set of study respondents tells us that there is a perception that the university is not yet performing at the same level in all of the phases, based on comparison to the importance rating. The figure below shows this in more detail.

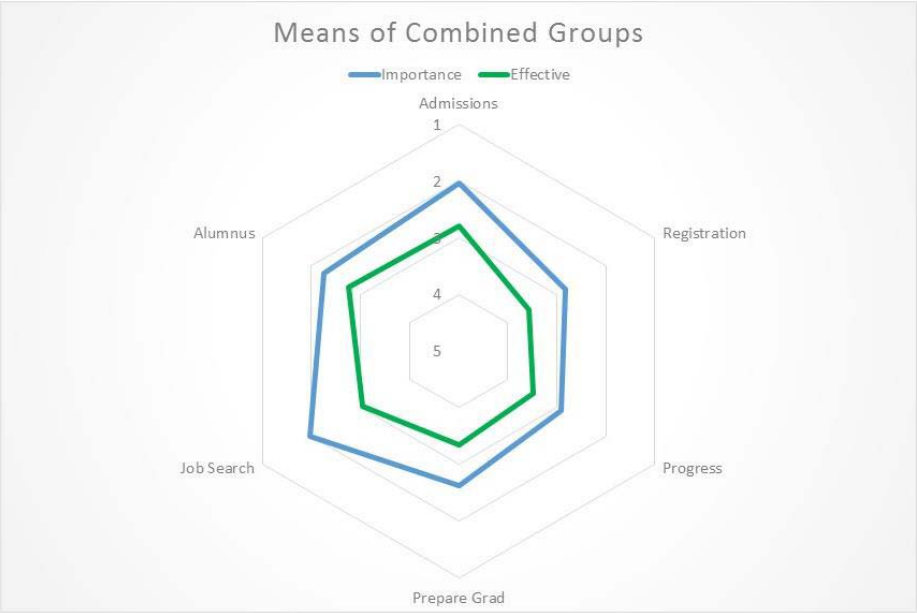

Figure 5.1 Combined Means

In this radar chart, it shows that the green area was smaller than the blue area, indicating that the importance means are smaller than the effectiveness means. This indicated that the effective level of the university was not at the importance level. When those are equal, the perceived performance is at the right level for the importance of the connection at that phase. The biggest gap in the chart above was during the job search phase. The importance mean and the effectiveness are the furthest apart at this phase. Since this is a very important part of the university goal from both staff and student view, it could be that there is work to do in this area to make these connections more consistently.

The next set of figures are looking purely at alignment at the highest level, very similarly to how IBM compared their social media study results across CEO/Executives

and the customer. These views combine the respondents into two groups: staff/faculty and students. Rather than focusing on the mean values themselves, these are focusing purely on the ordering based on mean value within each of the two groups. The figure below is the first of this set and it looks at the overall alignment of the importance of connection during these phases.

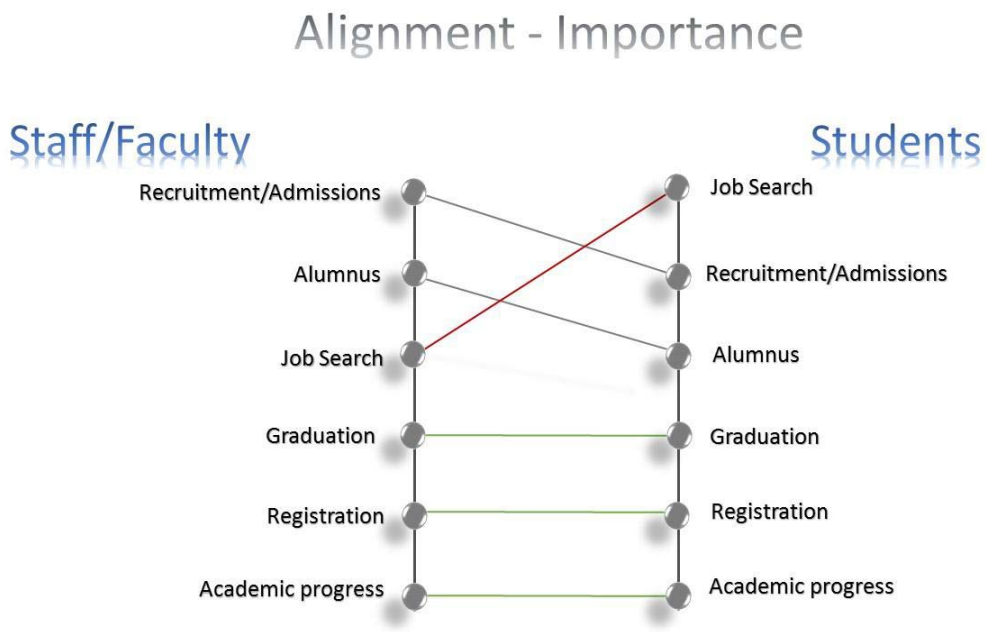

Figure 5.2 Alignment-Importance

This figure shows that there is a lot of alignment in the overall importance of connection during these phases, with the biggest difference being during the job search phase. Connection during this phase is of course going to be more important to students than to faculty/staff that may underestimate its value to the students.

The next figure looks at the very same alignment, except that it looked at the effectiveness aspect.

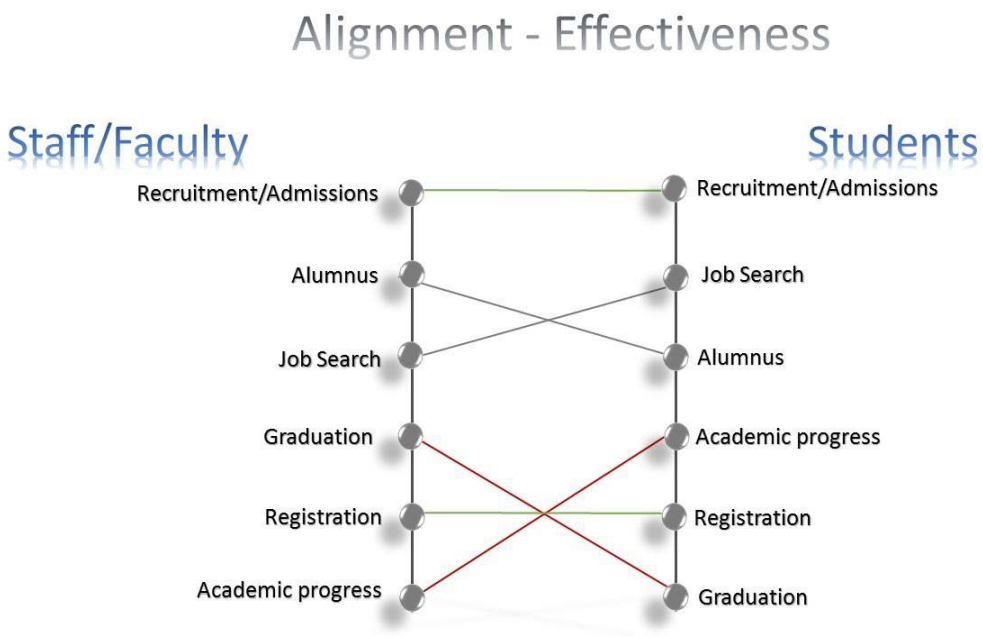

Figure 5.3 Alignment – Effectiveness

This figure showed that both groups agree that the university was most effective at connecting via social media to students during the recruitment phase. They were out of alignment more around the effectiveness of connection during graduation and during academic progression.

The final two figures took the same alignment concept and applied it to both importance and effectiveness within the same group. For example, the figure below compares the overall alignment within the staff/faculty group for both aspects.

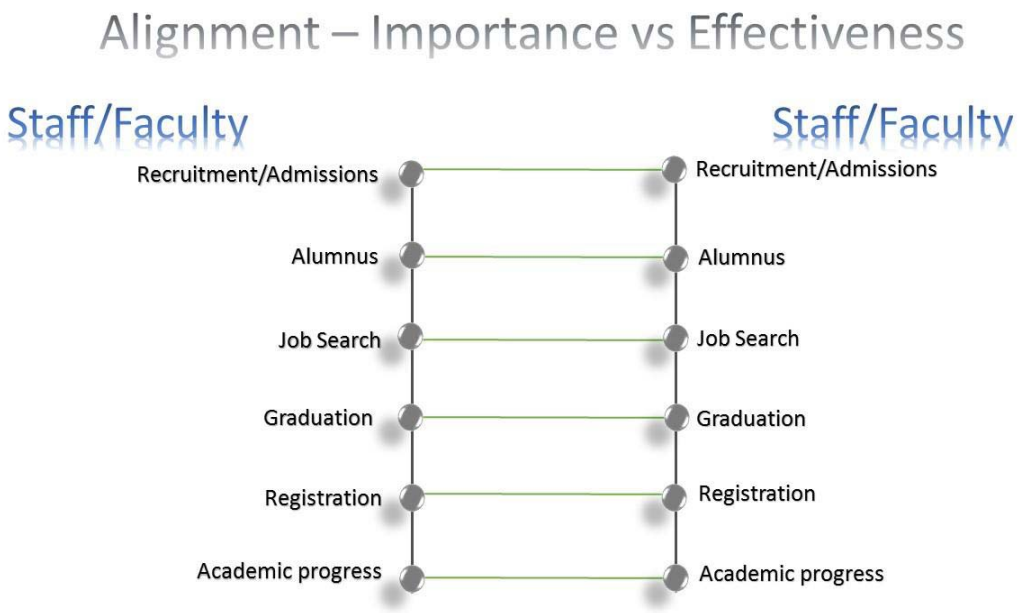

Figure 5.4 Staff/Faculty Alignment

In this figure, the staff group is in complete alignment of ordering between both the importance and the effectiveness. The student group did not find such complete alignment within the group as shown in the next figure.

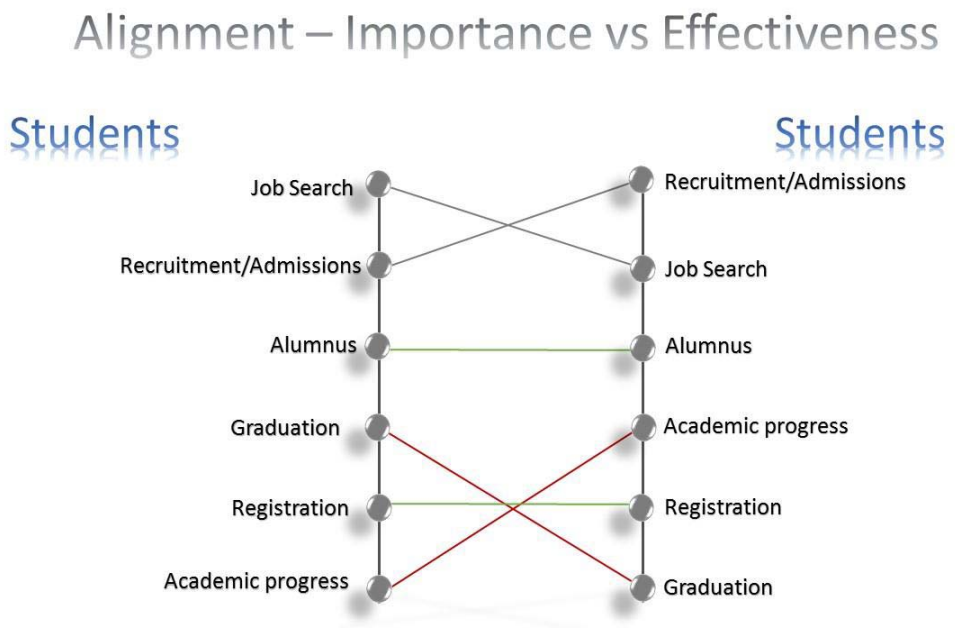

Figure 5.5 Student Alignment

The student groups showed less alignment in the ordering around the importance and effectiveness during the graduation and academic progression phases. All in all, it is clear that the perception exists that there is work that the university could be doing to improve social media connections to student during times that are important to the students. This is evident from the statistical analysis and through just a view of the overall alignment.

5.3 Next Steps

The final step of any research study is to understand where the knowledge was before the study, how it has evolved after the new knowledge was created, and where it could go from this point. The knowledge base around the social media customer

relationship management in higher education has not yet evolved as quickly at the social media tool sets have evolved. The consumer world is moving towards this analysis and attempting to understand the value of aligning overall effort to the overall value derived from those efforts. In a sense, if social media efforts are not landing new customers or extending the lifetime of existing customers through loyalty, then what is in it for them to spend a ton of money on it?

Higher education is entering a phase of disruption to normal operations. Increased globalization and competition will force these institutions to change. Student affordability will lead towards students showing up at research institutions later in their academic careers with courses and competencies pre-baked from online or local institutions. Or the conversion of the 4+ year degree into a shorter completion timeframe will mean that the student relationship is much shorter and less personal. Universities will have to respond as so many corporations have with spending resources to build their end product into an unmatched experience. Industry has shown that the way to do this is with powerful data-driven customer relationship management shifted from the company environment to where the customers are.

Clearly, social media has been a disruptive technology all over the world, but just as much so on university campuses. The incoming students use visual cues in every part of their daily lives through the images and videos that make up their experience set. As these social media toolsets continue to evolve, so must the stand and deliver lecture and text book. Future work in this area should be focused on the academic progression

and social learning aspects of these powerful toolsets in higher education. Continuing to delve into these areas could help universities remain relevant in an age where dinosaurs are viewed in the same way as Facebook to a major, impactful stakeholder.

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APPENDICES

APPENDIX A. SURVEY INSTRUMENT/INFORMATION SHEET

RESEARCH PARTICIPANT INFORMATION SHEET

Social Customer Relationship Management in Higher Education

IRB 1601016993

Prof. Jeffrey Whitten

Purdue Polytechnic Institute

Purdue University

What is the purpose of this study?

The purpose of this study is to understand people's perceptions of how and when the university should be interacting with its students over social media or social media-like applications as well as how the university is performing against those perceptions.

What will I do if I choose to be in this study?

If you participate in this study, you will be asked some basic information about yourself (University role, College/Dept, Classification, Gender) and then asked to rank some high level categories of social media applications that you feel the university should use in interacting with the students.

You will then be asked to rate first the importance and then the effectiveness of the university social media relationship with students at several points in a student's career.

How long will I be in the study?

The study will take 10-15 minutes to complete.

What are the possible risks or discomforts?

The risk level is minimal and is no greater than the participant would encounter in daily life.

Are there any potential benefits?

There is no direct benefit to participating in the study. The potential benefit is to understand if the university faculty/staff are aligning its social media efforts with what the students want and need from the university via social media.

Will I receive payment or other incentive?

After completing this survey, you will have the opportunity to participate in a random drawing for a chance to win one of two $25 Starbuck's gift cards. The odds of winning are dependent on the number of participants and everyone has an equal chance of winning. This survey will be sent to all Purdue West Lafayette student along with a subset of faculty and staff.

Will information about me and my participation be kept confidential?

The project's research records may be reviewed by departments at Purdue University responsible for regulatory and research oversight.

Because this study is asking about perceptions around the performance of the university, the survey will not ask you to identify yourself. There is also not enough information being requested about you to identify an individual in a specific audience. All results that will be presented will be discussed as a specific audience segments rather than discussed as an individual. The survey will not require authentication/logon and will be publicly accessible from any location via a link.

What are my rights if I take part in this study?

Your participation in this study is voluntary. You may choose not to participate or, if you agree to participate, you can withdraw your participation at any time without penalty or loss of benefits to which you are otherwise entitled.

Who can I contact if I have questions about the study?

If you have questions, comments or concerns about this research project, you can talk to one of the researchers. Please contact Purdue Polytechnic Master's student, Victoria Farnsworth (765-494-9796) and Professor, Jeffrey Whitten (765-494-0000) of the department of Computer and Information Technology. This study has been approved by Purdue University Institutional Review Board (IRB).

If you have questions about your rights while taking part in the study or have concerns about the treatment of research participants, please call the Human Research Protection Program at (765) 494-5942, email (irb@purdue.edu)or write to:

Human Research Protection Program - Purdue University
Ernest C. Young Hall, Room 1032
155 S. Grant St.,
West Lafayette, IN 47907-2114

BEGIN SURVEY

1. Please select one of the following that best shows your primary role at the university?

Radio button: Faculty (to question 3), Staff (to question 3), Undergraduate Student,

Graduate Student, Non traditional Student

2. If you are a student, please select your College(s) below. (Checkbox allowing multiple selections)
    - College of Agriculture
    - College of Education
    - College of Engineering
    - Exploratory Studies
    - College of Health and Human Sciences
    - College of Liberal Arts
    - Krannert School of Management
    - College of Pharmacy
    - Purdue Polytechnic Institute
    - College of Science
    - College of Veterinary Medicine
    - Honors College
    - The Graduate School

3. If you are a faculty/staff member, please select your department.
    a. College of Agriculture
    b. College of Education
    c. College of Engineering
    d. Exploratory Studies
    e. College of Health and Human Sciences
    f. College of Liberal Arts

g. Krannert School of Management
h. College of Pharmacy
i. Purdue Polytechnic Institute
j. College of Science
k. College of Veterinary Medicine
l. Honors College
m. The Graduate School
n. Other_____

4. Please identify your gender:
   Radio button: Male, Female, Do not wish to declare, Other

5. If you are a student, please identify your classification:
   Radio button: Freshman, Sophomore, Junior, Senior, Non Degree, Masters, Doctorate, and Professional, Other

PAGE BREAK

6. To choose the top 3 categories, drag them into the box on the right with the first item being the most important, followed by the second and third. Categories/Tools in the box and at the top of the list are those that you feel that the university should be using to connect to students. If you feel that there is a category missing, please add to the "Other" box and then drag into the three most important box.

Option: I am unfamiliar with any of these social media categories or tools (ranking grays out) or I am willing to try ranking them

a. Social/Business networking sites- Facebook, Google Plus, CafeMom, Gather, Fitsugar, LinkedIn
b. Micro-blogging sites- Twitter, Tumblr, Posterous
c. Collaboration tools- Wikipedia, WikiTravel, WikiBooks
d. Photo sharing sites- Flikr, Instagram, Pinterest, SnapChat

e. Video sharing/Streaming sites- YouTube, Vimeo, Viddler, iTunes
f. Virtual worlds- Second Life, World of Warcraft, Farmville
g. Location based services- Check-ins, Facebook Places, Foursquare, Yelp
h. Widgets- Profile badges, Like buttons
i. Social bookmarking and news aggregation- Digg, Delicious
j. Learning/Progress Tools – Hotseat, Signals, Mixable, Passport, Convoy
k. Other _____

7. How important is it for the university to connect via social media-like tools with students during recruitment and admissions?

Very important (5), Somewhat important (4), Neutral (3), Not very important (2), Not at all important (1)

8. How important is it for the university to connect via social media-like tools with students during course enrollment/registration?

Very important (5), Somewhat important (4), Neutral (3), Not very important (2), Not at all important (1)

9. How important is it for the university to connect via social media-like tools with students in order to help them academically progress and be successful?

Very important (5), Somewhat important (4), Neutral (3), Not very important (2), Not at all important (1)

10. How important is it for the university to connect via social media-like tools with students as they are preparing to graduate?

Very important (5), Somewhat important (4), Neutral (3), Not very important (2), Not at all important (1)

11. How important is it for the university to connect via social media-like tools with students as they are searching for a job?

Very important (5), Somewhat important (4), Neutral (3), Not very important (2), Not at all important (1)

12. How important is it for the university to connect via social media-like tools with alumni?

Very important (5), Somewhat important (4), Neutral (3), Not very important (2), Not at all important (1)

13. How effective is the university at connecting via social media-like tools with students during recruitment and admissions?

Very effective (5), Somewhat effective (4), Neutral (3), Not very effective (2), Not at all effective (1)

14. How effective is the university at connecting via social media-like tools with students during course enrollment/registration?

Very effective (5), Somewhat effective (4), Neutral (3), Not very effective (2), Not at all effective (1)

15. How effective is the university at connecting via social media-like tools with students in order to help them academically progress and be successful?

Very effective (5), Somewhat effective (4), Neutral (3), Not very effective (2), Not at all effective (1)

16. How effective is the university at connecting via social media-like tools with students as they are preparing to graduate?

Very effective (5), Somewhat effective (4), Neutral (3), Not very effective (2), Not at all effective (1)

17. How effective is the university at connecting via social media-like tools with students as they are searching for a job?

Very effective (5), Somewhat effective (4), Neutral (3), Not very effective (2), Not at all effective (1)

18. How effective is the university at connecting via social media-like tools with alumni?

Very effective (5), Somewhat effective (4), Neutral (3), Not very effective (2), Not at all effective (1)

PAGE BREAK

This concludes the study. Thank you very much for your participation.
The results from this study will help researchers understand perception around the university's use of social media tools to connect with students. If you would like to be considered in a drawing for one of two $25 dollar Starbucks gift cards that can be received via your email address, please click following link to be sent to an additional separate form to fill out your contact information.

A separate survey form is being used to gather your entry for the gift cards so as to disassociate that entry with your answers to this survey.

APPENDIX B. IRB APPROVAL

PU

Protocol #: 1601016993
Investigator: WHITTEN, JEFFREY L
Status: Exempt
Expiration Date:
Last Approval Date:
Sequence Number: 3

Purdue University
IRB Protocol Summary

Protocol Details

Title: SOCIAL CUSTOMER RELATIONSHIP MANAGEMENT IN HIGHER EDUCATION

Protocol Type: Request for Exemption

Application Date: 01/15/2016

Reference Num 1:

Investigators

Person Name	Units		Affiliate	Training Flag
WHITTEN, JEFFREY L	41910000	Computer & Info Tech	Faculty	N

Study Personnel

PersonName	Role	Affiliation	Training
FARNSWORTH, VICTORIA A	Investigator	Non-Faculty	N

Correspondents

Type	Name	Comments
Study/Research Personnel	WHITTEN, JEFFREY L	

APPENDIX C. RESEARCH ANNOUNCEMENT

Study on social media use in higher education

Purdue researchers in the Purdue Polytechnic Institute are seeking Purdue faculty, staff, and students over the age of 18 to provide their perception of how and when the university should be interacting with its students over social media as well as how the university is performing against those perceptions.

Participants will be asked to take on online survey that should last around 10 minutes. Those that complete the survey can then sign up to be included in a drawing for one of two $25 Starbucks gift cards.

If you have questions, comments or concerns about this research project, please contact Purdue Polytechnic Master's student, Victoria Farnsworth (765-494-9796) or Professor, Jeffrey Whitten (765-494-2566) of the department of Computer and Information Technology. This study has been approved by Purdue University Institutional Review Board (IRB).

The survey can be found at the following link.

https://purdue.qualtrics.com/SE/?SID=SV_86NePCw0bQN9Yqx

APPENDIX D. STATISTICAL ANALYSIS

Validation Output

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T-TEST PAIRS=Importance3 Importance3 WITH RankTransform RankTrans2 (PAIRED)
  /CRITERIA=CI(.9500)
  /MISSING=ANALYSIS.
```

T-Test

Notes

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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1737
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST PAIRS=Importance3 Importance3 WITH RankTransform RankTrans2 (PAIRED) /CRITERIA=CI(.9500) /MISSING=ANALYSIS.
Resources	Processor Time	00:00:00.02

Elapsed Time	00:00:00.02

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Importance3	2.91	1330	1.185	.032
	RankTransform	3.58	1330	.903	.025
Pair 2	Importance3	2.91	1330	1.185	.032
	RankTrans2	4.37	1330	1.284	.035

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Importance3 & RankTransform	1330	-.001	.962
Pair 2	Importance3 & RankTrans2	1330	.011	.687

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower				
Pair 1	Importance3 - RankTransform	-.666	1.490	.041	-.746				
Pair 2	Importance3 - RankTrans2	-1.456	1.737	.048	-1.550				

Paired Samples Test

		Paired Differences			
		95% Confidence Interval of the Difference			
		Upper	t	df	Sig. (2-tailed)
Pair 1	Importance3 - RankTransform	-.586	-16.302	1329	.000
Pair 2	Importance3 - RankTrans2	-1.363	-30.569	1329	.000

```
GET
  FILE='\\myhome.itap.purdue.edu\puhome\My
Documents\ThesisFiles\Importance.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
ONEWAY Importance1 Importance2 Importance3 Importance4 Importance5
Importance6 BY Role
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS
  /POSTHOC=TUKEY ALPHA(0.05).
```

Oneway

Notes

Output Created		06-APR-2016 17:52:19
Comments		
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1737
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY Importance1 Importance2 Importance3 Importance4 Importance5 Importance6 BY Role /STATISTICS DESCRIPTIVES /MISSING ANALYSIS /POSTHOC=TUKEY ALPHA(0.05).
Resources	Processor Time	00:00:00.08
	Elapsed Time	00:00:00.11

[DataSet1] \\myhome.itap.purdue.edu\puhome\My

Documents\ThesisFiles\Importance.sav

Important Role Output

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean: Lower Bound			
Importance1	Faculty	9	1.67	1.323	.441	.65			
	Staff	97	1.47	.765	.078	1.32			
	Undergraduate Student	784	2.05	.968	.035	1.99			
	Graduate Student	418	2.17	1.145	.056	2.06			
	Non-traditional Student	22	1.95	.999	.213	1.51			
	Total	1330	2.04	1.030	.028	1.99			
Importance2	Faculty	9	3.00	1.000	.333	2.23			
	Staff	97	2.45	1.173	.119	2.22			
	Undergraduate Student	784	2.81	1.185	.042	2.73			
	Graduate Student	418	2.95	1.250	.061	2.83			
	Non-traditional Student	22	2.82	1.259	.268	2.26			
	Total	1330	2.83	1.210	.033	2.77			
Importance3	Faculty	9	3.33	1.414	.471	2.25			
	Staff	97	2.56	1.154	.117	2.32			
	Undergraduate Student	784	2.86	1.121	.040	2.78			
	Graduate Student	418	3.09	1.283	.063	2.97			
	Non-traditional Student	22	2.77	1.020	.218	2.32			
	Total	1330	2.91	1.185	.032	2.85			

Importance4	Faculty	9	2.56	.882	.294	1.88			
	Staff	97	2.35	1.118	.114	2.13			
	Undergraduate Student	784	2.63	1.128	.040	2.55			
	Graduate Student	418	2.68	1.223	.060	2.56			
	Non-traditional Student	22	2.27	1.077	.230	1.80			
	Total	1330	2.62	1.158	.032	2.56			
Importance5	Faculty	9	2.33	.866	.289	1.67			
	Staff	97	1.82	.854	.087	1.65			
	Undergraduate Student	784	1.99	1.013	.036	1.92			
	Graduate Student	418	1.96	1.096	.054	1.86			
	Non-traditional Student	22	2.00	1.309	.279	1.42			
	Total	1330	1.97	1.034	.028	1.92			
Importance6	Faculty	9	1.56	.726	.242	1.00			
	Staff	97	1.82	.936	.095	1.64			
	Undergraduate Student	784	2.36	1.079	.039	2.29			
	Graduate Student	418	2.12	1.072	.052	2.02			
	Non-traditional Student	22	2.59	1.098	.234	2.10			
	Total	1330	2.25	1.078	.030	2.19			

Descriptives

		95% Confidence Interval for Mean		
		Upper Bound	Minimum	Maximum
Importance1	Faculty	2.68	1	5
	Staff	1.63	1	5
	Undergraduate Student	2.12	1	5
	Graduate Student	2.28	1	5

	Non-traditional Student	2.40	1	4
	Total	2.10	1	5
Importance2	Faculty	3.77	1	4
	Staff	2.69	1	5
	Undergraduate Student	2.90	1	5
	Graduate Student	3.07	1	5
	Non-traditional Student	3.38	1	5
	Total	2.90	1	5
Importance3	Faculty	4.42	1	5
	Staff	2.79	1	5
	Undergraduate Student	2.94	1	5
	Graduate Student	3.21	1	5
	Non-traditional Student	3.23	1	5
	Total	2.98	1	5
Importance4	Faculty	3.23	1	4
	Staff	2.58	1	5
	Undergraduate Student	2.71	1	5
	Graduate Student	2.79	1	5
	Non-traditional Student	2.75	1	5
	Total	2.68	1	5
Importance5	Faculty	3.00	1	3
	Staff	2.00	1	5
	Undergraduate Student	2.06	1	5
	Graduate Student	2.07	1	5
	Non-traditional Student	2.58	1	5
	Total	2.03	1	5
Importance6	Faculty	2.11	1	3
	Staff	2.01	1	5
	Undergraduate Student	2.44	1	5
	Graduate Student	2.23	1	5
	Non-traditional Student	3.08	1	5
	Total	2.30	1	5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Importance1	Between Groups	39.390	4	9.847	9.516	.000
	Within Groups	1371.168	1325	1.035		
	Total	1410.557	1329			
Importance2	Between Groups	20.479	4	5.120	3.526	.007
	Within Groups	1923.795	1325	1.452		
	Total	1944.274	1329			
Importance3	Between Groups	29.899	4	7.475	5.395	.000
	Within Groups	1835.632	1325	1.385		
	Total	1865.531	1329			
Importance4	Between Groups	11.169	4	2.792	2.089	.080
	Within Groups	1770.797	1325	1.336		
	Total	1781.967	1329			
Importance5	Between Groups	3.643	4	.911	.852	.492
	Within Groups	1416.436	1325	1.069		
	Total	1420.079	1329			
Importance6	Between Groups	41.375	4	10.344	9.114	.000
	Within Groups	1503.735	1325	1.135		
	Total	1545.110	1329			

Post Hoc Tests

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Role	(J) Role	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Importance1	Faculty	Staff	.192	.354	.983	-.78	1.16
		Undergraduate Student	-.387	.341	.788	-1.32	.54
		Graduate Student	-.501	.343	.588	-1.44	.44
		Non-traditional Student	-.288	.403	.953	-1.39	.81
	Staff	Faculty	-.192	.354	.983	-1.16	.78
		Undergraduate Student	-.579*	.109	.000	-.88	-.28
		Graduate Student	-.693*	.115	.000	-1.01	-.38
		Non-traditional Student	-.480	.240	.267	-1.14	.18
	Undergraduate Student	Faculty	.387	.341	.788	-.54	1.32
		Staff	.579*	.109	.000	.28	.88
		Graduate Student	-.114	.062	.346	-.28	.05
		Non-traditional Student	.099	.220	.992	-.50	.70
	Graduate Student	Faculty	.501	.343	.588	-.44	1.44
		Staff	.693*	.115	.000	.38	1.01
		Undergraduate Student	.114	.062	.346	-.05	.28
		Non-traditional Student	.213	.223	.874	-.39	.82
		Faculty	.288	.403	.953	-.81	1.39

	Non-traditional Student	Staff	.480	.240	.267	-.18	1.14
		Undergraduate Student	-.099	.220	.992	-.70	.50
		Graduate Student	-.213	.223	.874	-.82	.39
Importance2	Faculty	Staff	.546	.420	.690	-.60	1.69
		Undergraduate Student	.188	.404	.990	-.92	1.29
		Graduate Student	.048	.406	1.000	-1.06	1.16
		Non-traditional Student	.182	.477	.996	-1.12	1.48
	Staff	Faculty	-.546	.420	.690	-1.69	.60
		Undergraduate Student	-.359*	.130	.045	-.71	.00
		Graduate Student	-.499*	.136	.002	-.87	-.13
		Non-traditional Student	-.365	.285	.703	-1.14	.41
	Undergraduate Student	Faculty	-.188	.404	.990	-1.29	.92
		Staff	.359*	.130	.045	.00	.71
		Graduate Student	-.140	.073	.310	-.34	.06
		Non-traditional Student	-.006	.260	1.000	-.72	.71
	Graduate Student	Faculty	-.048	.406	1.000	-1.16	1.06
		Staff	.499*	.136	.002	.13	.87
		Undergraduate Student	.140	.073	.310	-.06	.34
		Non-traditional Student	.134	.264	.987	-.59	.85
	Non-traditional Student	Faculty	-.182	.477	.996	-1.48	1.12
		Staff	.365	.285	.703	-.41	1.14
		Undergraduate Student	.006	.260	1.000	-.71	.72
		Graduate Student	-.134	.264	.987	-.85	.59
Importance3	Faculty	Staff	.777	.410	.321	-.34	1.90
		Undergraduate Student	.475	.395	.749	-.60	1.55
		Graduate Student	.242	.397	.973	-.84	1.33

		Non-traditional Student	.561	.466	.749	-.71	1.83
	Staff	Faculty	-.777	.410	.321	-1.90	.34
		Undergraduate Student	-.302	.127	.121	-.65	.04
		Graduate Student	-.534*	.133	.001	-.90	-.17
		Non-traditional Student	-.216	.278	.937	-.98	.54
	Undergraduate Student	Faculty	-.475	.395	.749	-1.55	.60
		Staff	.302	.127	.121	-.04	.65
		Graduate Student	-.232*	.071	.010	-.43	-.04
		Non-traditional Student	.086	.254	.997	-.61	.78
	Graduate Student	Faculty	-.242	.397	.973	-1.33	.84
		Staff	.534*	.133	.001	.17	.90
		Undergraduate Student	.232*	.071	.010	.04	.43
		Non-traditional Student	.318	.257	.730	-.39	1.02
	Non-traditional Student	Faculty	-.561	.466	.749	-1.83	.71
		Staff	.216	.278	.937	-.54	.98
		Undergraduate Student	-.086	.254	.997	-.78	.61
		Graduate Student	-.318	.257	.730	-1.02	.39
Importance4	Faculty	Staff	.205	.403	.986	-.90	1.31
		Undergraduate Student	-.075	.388	1.000	-1.13	.98
		Graduate Student	-.121	.389	.998	-1.19	.94
		Non-traditional Student	.283	.457	.972	-.97	1.53
	Staff	Faculty	-.205	.403	.986	-1.31	.90
		Undergraduate Student	-.280	.124	.163	-.62	.06
		Graduate Student	-.327	.130	.090	-.68	.03
		Non-traditional Student	.078	.273	.999	-.67	.82
		Faculty	.075	.388	1.000	-.98	1.13

	Undergraduate Student	Staff	.280	.124	.163	-.06	.62
		Graduate Student	-.047	.070	.963	-.24	.14
		Non-traditional Student	.357	.250	.608	-.33	1.04
	Graduate Student	Faculty	.121	.389	.998	-.94	1.19
		Staff	.327	.130	.090	-.03	.68
		Undergraduate Student	.047	.070	.963	-.14	.24
		Non-traditional Student	.404	.253	.498	-.29	1.10
	Non-traditional Student	Faculty	-.283	.457	.972	-1.53	.97
		Staff	-.078	.273	.999	-.82	.67
		Undergraduate Student	-.357	.250	.608	-1.04	.33
		Graduate Student	-.404	.253	.498	-1.10	.29
Importance5	Faculty	Staff	.509	.360	.620	-.48	1.49
		Undergraduate Student	.341	.347	.863	-.61	1.29
		Graduate Student	.369	.348	.827	-.58	1.32
		Non-traditional Student	.333	.409	.926	-.78	1.45
	Staff	Faculty	-.509	.360	.620	-1.49	.48
		Undergraduate Student	-.168	.111	.559	-.47	.14
		Graduate Student	-.139	.117	.754	-.46	.18
		Non-traditional Student	-.175	.244	.952	-.84	.49
	Undergraduate Student	Faculty	-.341	.347	.863	-1.29	.61
		Staff	.168	.111	.559	-.14	.47
		Graduate Student	.028	.063	.991	-.14	.20
		Non-traditional Student	-.008	.224	1.000	-.62	.60
	Graduate Student	Faculty	-.369	.348	.827	-1.32	.58
		Staff	.139	.117	.754	-.18	.46
		Undergraduate Student	-.028	.063	.991	-.20	.14

		Non-traditional Student	-.036	.226	1.000	-.65	.58
	Non-traditional Student	Faculty	-.333	.409	.926	-1.45	.78
		Staff	.175	.244	.952	-.49	.84
		Undergraduate Student	.008	.224	1.000	-.60	.62
		Graduate Student	.036	.226	1.000	-.58	.65
Importance6	Faculty	Staff	-.269	.371	.951	-1.28	.74
		Undergraduate Student	-.808	.357	.158	-1.78	.17
		Graduate Student	-.566	.359	.512	-1.55	.41
		Non-traditional Student	-1.035	.422	.101	-2.19	.12
	Staff	Faculty	.269	.371	.951	-.74	1.28
		Undergraduate Student	-.539*	.115	.000	-.85	-.23
		Graduate Student	-.297	.120	.097	-.63	.03
		Non-traditional Student	-.766*	.252	.020	-1.45	-.08
	Undergraduate Student	Faculty	.808	.357	.158	-.17	1.78
		Staff	.539*	.115	.000	.23	.85
		Graduate Student	.242*	.065	.002	.07	.42
		Non-traditional Student	-.227	.230	.861	-.86	.40
	Graduate Student	Faculty	.566	.359	.512	-.41	1.55
		Staff	.297	.120	.097	-.03	.63
		Undergraduate Student	-.242*	.065	.002	-.42	-.07
		Non-traditional Student	-.469	.233	.261	-1.11	.17
	Non-traditional Student	Faculty	1.035	.422	.101	-.12	2.19
		Staff	.766*	.252	.020	.08	1.45
		Undergraduate Student	.227	.230	.861	-.40	.86
		Graduate Student	.469	.233	.261	-.17	1.11

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Importance1

Tukey HSD[a,b]

Role	N	Subset for alpha = 0.05
		1
Staff	97	1.47
Faculty	9	1.67
Non-traditional Student	22	1.95
Undergraduate Student	784	2.05
Graduate Student	418	2.17
Sig.		.069

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.318.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Importance2

Tukey HSD[a,b]

Role	N	Subset for alpha = 0.05
		1
Staff	97	2.45
Undergraduate Student	784	2.81
Non-traditional Student	22	2.82
Graduate Student	418	2.95
Faculty	9	3.00
Sig.		.412

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.318.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Importance3

Tukey HSD[a,b]

Role	N	Subset for alpha = 0.05
		1
Staff	97	2.56
Non-traditional Student	22	2.77
Undergraduate Student	784	2.86
Graduate Student	418	3.09
Faculty	9	3.33
Sig.		.085

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.318.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Importance4

Tukey HSD[a,b]

Role	N	Subset for alpha = 0.05
		1
Non-traditional Student	22	2.27
Staff	97	2.35
Faculty	9	2.56
Undergraduate Student	784	2.63
Graduate Student	418	2.68
Sig.		.667

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.318.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Importance5

Tukey HSD[a,b]

Role	N	Subset for alpha = 0.05
		1
Staff	97	1.82
Graduate Student	418	1.96
Undergraduate Student	784	1.99
Non-traditional Student	22	2.00
Faculty	9	2.33
Sig.		.327

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.318.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Importance6

Tukey HSD[a,b]

Role	N	Subset for alpha = 0.05		
		1	2	3
Faculty	9	1.56		
Staff	97	1.82	1.82	
Graduate Student	418	2.12	2.12	2.12
Undergraduate Student	784		2.36	2.36

Non-traditional Student	22			2.59
Sig.		.249	.299	.443

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 29.318.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.